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THE
MARYLAND FARMER:
DEVOTED TO
Agriculture, Horticulture, and Rural Economy.

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The Resources of the United States for Sheep Husbandry and the Wool Manufacture.

THE ADDRESS OF HON. JOHN L. HAYES.

Continued from Page 103, [Vol. XVI., Md. Far.]

MUTTON SHEEP.

In discussing the merinos, I have dwelt upon only one of the aptitudes of the ovine animals,—that for wool production. The aptitudes of sheep for producing mutton and manure, which are no less important, demand a brief consideration. Under this head, I shall speak less of what we have done than what we ought to do. I need not say that the flesh-producing aptitude is found in the highest degree in the long-wooled sheep of the English races. Before this audience, I need not dwell upon the special characteristics of the principal English races. You all know that English sheep-husbandry, such as it now exists, for mutton as its principal object, commenced with the introduction of the turnip culture, by William of Orange, at the end of the seventeenth century, as by this culture the same land could support three times as many sheep as before; and that the English sheep-husbandry received, soon after, its second great impulse, through Bakewell's creation of the New Leicester breed; by the use of which race it became possible to fatten an animal in one year, and give it full maturity in two years, whereas formerly it required four. You are aware, too, that the New Leicester race, with its extraordinary power of imparting its qualities to other races, has modified all the other English breeds. Long wool and fat mutton became the chief characteristics of English sheep-husbandry; as did the worsted industry, employing the long wools, become the predominant branch of the English wool-manufacture. This change had an astonishing influence upon the value of lands in England and Scotland. Sir Walter Scott, whose practical eye served him as much as his imagination, well illustrates this in the introductory chapter of the "Black Dwarf." He

represents a South Highland sheep-farmer and his old shepherd discoursing at a wayside inn upon the changes from the times of the short-wooled blackfaces, since the long-wooled sheep had come in:

"'Ill would your father hae liked' [says the old shepherd to the farmer] 'to hae seen that braw sunny knowe a' riven out wi' the pleugh in the fashion it is at this day. It was a bonny knowe, and an unco braw shelter for the lambs in a severe morning like this.'

"'Ay,' said his patron; 'but ye kin we maun hae turnips for the lang sheep, billie, and muckle hard work to get them, baith wi' the pleugh and howe.'

"'Aweel, aweel, maister,' said the attendant, 'short sheep had short rents, I'm thinking.'

"Here my worthy and learned patron [Mr. Jedediah Cleishbotham] interposed, and observed, 'that he could never perceive any material difference, in point of longitude, between one sheep and another.'

"This occasioned a loud horse laugh on the part of the farmer, and an astonished stare on the part of the shepherd. 'It's the woo' man,—it's the woo', and no the beasts themsells, that makes them be ca'd lang or short. I believe if ye were to measure their backs, the short sheep wad be rather the langer-bodied o' the twa; but it's the woo' that pays the rent in thae days, and it had muckle need.'

"Odd, Bauldie says very true,—short sheep did make short rents,—my father paid for our steading just threescore punds, and it stands me in three hundred, plack and bawbee."

This long extract would be inexcusable did it not illustrate the point which I wish to enforce; viz., that high-priced lands and long or mutton sheep go together. The Eastern States must revive their declining sheep-husbandry, not by restoring the old merinos, but by adopting the English system. The great Thiers said, "The agriculture of France cannot dispense with sheep;" neither can the agriculture of New England and

New York. The land *must* be kept up. There can be no reliance upon commercial fertilizers until there is more honesty in commerce. It is beyond dispute that grain crops cannot for long periods be profitably grown, except by combining them with some sort of stock growing. Cattle raising for beef is out of the question at the East since the opening of the winter-grazing lands of the far West. The most experienced stock-raisers of the country inform me that even Kentucky must abandon cattle raising for beef. Great Britain has 34,532,000 sheep, on 77,284.184 acres, which realize an annual product of the value of \$150,000,000. Here is a demonstration that, on the highest-priced agricultural lands in the world, sheep-husbandry is not only profitable but indispensable. You are all aware that, by the combination of sheep-husbandry with wheat culture, lands in England which in the time of Elizabeth produced on an average six and a half bushels of wheat to the acre, produce now over thirty bushels, and that the fertilizing influence of the sheep on the wheat is regarded by the most recent agricultural writers of England as the main object of her sheep husbandry.

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Permit me to give one or two fresh illustrations upon this point in hand, furnished me by practical farmers. The farmers of Connecticut in former times, it would appear, had a full appreciation of the fertilizing influences of the sheep. In the town of Goshen, in Connecticut, according to my informant, the public roads were anciently laid out eight rods wide; and in these roads it was the custom to pasture in common the sheep belonging to the individual proprietors of the town, which were taken care of by a man and a boy, at the expense of the town authorities. The yarding of the sheep for each night, in order that the benefits of the manure might not be lost, was let out at the town meeting. On the evening of the 27th of May, just preceding the famous cold summer of 1816, it came the turn of a certain farmer to yard the sheep for the night. He had no field fenced which would hold the sheep,—some eight hundred in number—except a field planted with corn, which had already come up. Preferring to sacrifice the corn to losing the manure, he turned the flock into this very field. On that night the frost cut off all the corn in the town, and the sheep had cut off our farmer's, who congratulated himself, in the morning, that he was no worse off than his neighbors. He soon found that he was better off. The sheep by cutting off the top shoots had saved the plants from being killed by the frost, and the droppings from the sheep in one night had so enriched the field that

it produced the largest crop of corn that had been grown in the town for years.

The valley of the Connecticut furnishes a more instructive illustration of the beneficial influences of sheep husbandry upon crops. I refer to the system of sheep-feeding for mutton and manure, in connection with the tobacco culture, &c., profitably pursued in that valley.

* * * * *

Mr. J. F. C. Allis, of East Whately, Mass. says:

"The cause for feeding so many sheep for their mutton in this valley is the high value of sheep manure for tobacco-growers, it having the effect on our light soil to produce dark-colored silky leaf, of good burning quality, suitable for wrapping cigars; the tobacco burns white, and has a good sweet flavor, perhaps owing to the potash it derives from the manure. So valuable do we consider this sheep manure that we have shipped, since 1870, from West Albany, from fifty to one hundred and fifty cords; costing from eight to ten dollars a cord, every spring. On our light soils, called pine-lands, after raising crops of tobacco, 2,000 pounds to the acre, we have sown wheat; yielding 30 bushels, plump berry, and heavy weight of straw, on land which without this dressing of manure is fit only for white beans. We of late years feed with our sweetest and finest hay, and mix with our corn one-third cotton-seed meal; by so feeding, our sheep fatten more easily, being more hardy and better conditioned, besides increasing the value of the manure and rendering it more full of plant food."

"Farmers in hill-towns, and some in the valley, are keeping ewes for raising lamb for early spring market; and those farmers who have good pasture for fall market realize for lambs, of from 40 to 70 pounds, from \$8 to \$10 each.

"This branch of sheep husbandry will undoubtedly increase among farmers, who will keep from fifteen to thirty head, notwithstanding the difficulty of good pasturage and the worry and destruction caused by dogs."

The reference in the above statement to the nuisance of dogs leads me to say, that no more important subject can come before this Agricultural Congress than the recommendation of legislative measures to remove this almost fatal obstacle to sheep husbandry in thickly-settled districts.

* * * * *

I do not recommend for New England any enterprise in sheep husbandry on a large scale. My intelligent correspondent above quoted indicates the modest scale upon which only this industry can be advantageously conducted. It has been wisely said, "Farmers, as a rule, should not go

into sheep husbandry to the neglect of other things. Let sheep be one of the products of the farm, not the only product: a few sheep well cared for will prove profitable to every farmer; while a large flock would become, in nine cases out of ten, a source of annoyance and expense." For this modest addition to the resources of ordinary farming, where city markets are accessible, I think there is no question that the long-wooled mutton races are best adapted. They best give the three dividends—wool, mutton and lambs. They thrive best in small flocks. The enormous clip of Canada wool is produced from small flocks, rarely exceeding fifty head. The wool, from six to about seven pounds to the animal, for a series of years, will bring good prices; as, unlike merino wools, it does not encounter competition with the product of the cheap pastoral lands in the Southern Hemisphere. Averaging at least 160 pounds in gross live-weight, the animals will sell for six cents a pound, when ordinary New England sheep sell for four or four and a half. The lambs have brought this year in the Brighton market from \$10 to \$12. The town of Hingham near Boston, under my observation, has conspicuously verified the profitableness of the Cotswolds,—the race at present most in vogue. One farmer realized \$1,000 from the produce of one hundred ewes, and many smaller flocks produced in the same proportion. The green and clean pastures now seen in this old town are in striking contrast with their waste and ragged look before the Cotswolds were introduced.

The mention of this breed leads me to question the wisdom of the preference which is generally given in our Eastern States to this race over the Leicesters. The farmers in Maine, whom I met at the session of their State board of agriculture, regarded the Leicester as less hardy in their climate than the Cotswolds. On the other hand, Mr. Motley, the well-informed lecturer on sheep husbandry at the Bussey Farm connected with Harvard University, who has grown the Leicesters very extensively, regards them as perfectly hardy in the climate of Eastern Massachusetts. The mutton of the Cotswold is coarse, and considered in England better adapted for the working man's than the gentleman's table. The mutton of the Leicester is deemed by its English breeders to be fully equal to that of the South Downs. Our famous Kentucky mutton comes from sheep in which the Cotswold has been qualified by the Down and merino blood. But it is rather in the interest of the worsted manufacturers, with whose wants I am familiar, that I desire that the Leicester should be more generally cultivated. Their wool is finer and more lustrous than that of the

Cotswold, and it is fitted for a greater variety of worsted fabrics. The Cotswold brought high prices during the war, when strong rather than fine-combing wools were in demand: it is serviceable for buntings, saddle girths, worsted epaulets, and trimmings; while the Leicester, with its fineness and lustre, is better fitted for alpacas and figured dress fabrics. The Canada wools formerly consisted principally of Leicester fibre. They have materially declined in value, through the recent introduction of Cotswolds. The Bradford Chamber of Commerce recommends the Leicester as the best sheep for worsted combing-wools; and Mr. Walworth, the most experienced and skillful expert in combing wools in this country, indorses this opinion. To this it may be added, that the experiments at the famous scientific Rothamsted farm of England have established the fact, that the Leicesters rank first in the production of the highest amount of wool to the hundred pounds live-weight, of any variety of English sheep. These observations should be qualified by the remark, that in many of the so-called Cotswolds of the present there is a large infusion of Leicester blood.

Let me not be understood to discountenance the growing of crosses of the Cotswold or Leicester with the American merino. This so-called half-bred wool is in great demand at the present day for worsted coatings and certain classes of dress-goods. This wool being worth to day, owing to this demand, 45 cents; while Leicester or Canada fleece sells for 40 cents only. This may be temporary. The mutton of these half-breeds, according to Mr. Allis before quoted, is in high request.

The half-bred flocks are preferred, as I am informed, by the highly intelligent and experienced growers of the important sheep district of New York,—the Genessee Valley,—possibly owing to the present high prices of their wool.

[TO BE CONTINUED.]

FACTS FOR FARMERS.

Wool contains 18 per cent. of nitrogen.

The tassel of corn is the male flower; the silk the female.

Two hundred and nine feet on each side will make a square acre.

Leaves have 170 mouths in a square inch under surface.

Five pounds of potash in a bushel of ashes.

It requires but seventy days to grow a crop of Hungarian. It can follow a crop of clover the same season, the right time to sow it being after the clover is harvested. About three pecks of seed to an acre is required.

FARM WORK FOR MAY.

There are a great many demands this month on the farmer and planter. Owing to the backwardness of the season, vegetation has been retarded, and therefore all the better for fruits, but grain crops and the grass are in consequence behind time. We presume oats and grass seeds have all been sown; wheat and rye fields harrowed over and rolled, after having had a dressing of salt and plaster or bone dust. Fences, gates and ditches all put in prime order. The land intended for corn should be deeply plowed, manured or fertilized and nearly ready for planting. With these things out of the way, the farmer has a fair start for the years' crops.

TOBACCO.

We are happy to hear that the "fly" has not been troublesome this year. Keep the beds free from grass and weeds; rake the beds with the tobacco rake" where the plants are too thick; sprinkle often with fine ashes, sand or well rotted stable manure; with either, mix a small portion of sulphur or soot and plaster. Prepare the land well for the reception of the plants; be sure to make the ground rich with stable manure well rotted, or use some fertilizer rich in potash. Ashes leached or unleached are the best manures we know of for tobacco, but they are not to be had generally. We think they would pay on this crop at a cost of \$15 to \$20 per acre, better than any other fertilizer or manure at a less price. In the North and in Pennsylvania, planters expend twice that amount in enriching every acre of the tobacco crop, and they find it profitable. The idea of making anything under the old system is preposterous. 600 pounds per acre of tobacco at \$2 50 per 100 pounds, won't pay. If by expending \$40 or \$50 per acre, and getting a return of 1,200 lbs. at \$10 per 100 pounds, will pay well and leave the land highly improved.

CORN

As we have said often before, plow deep, pulverize the land well, manure highly, for corn is a greedy plant, plant good seed at any cost, and cultivate thoroughly, do not plant too closely, it requires sun and air, and do not "sucker" the corn.

If planted in drills, the increased measure per acre will be considerable, but it is questionable whether the product will be more profitable than that of corn planted in "checks" or hills, when the extra hand working with hoes is taken into consideration. On well prepared land divided by checks, say, 3 by 4 feet, and two stalks in a hill or check, a hoe need hardly ever be used, as cultiva-

tors and shovel plows will do all the work required, and horses will substitute men. Always bear in mind that half the work of making a corn crop should be done before the corn is planted or makes its appearance above ground. If the ground be full of grub-worms, sow 4 or 5 bushels of salt per acre and harrow it in, and you will likely not be plagued with many worms. Plant 4 to 6 grains in a hill, or quite thick in the drill as it is easier to pull out after the worms and birds have done their worse, than to replant all the time.

POTATOES,

Plant your Irish potatoes at once, if you have not already done so. Try some of the new varieties on a limited scale. The Hebron and Saint Patrick are now the highest priced and most talked of among the newer kinds.

ROOTS.

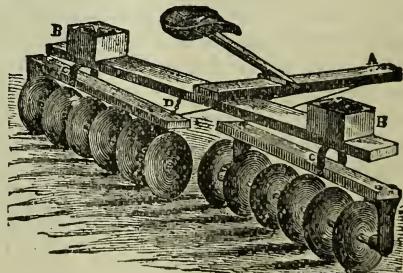
Get your ground, intended for beets, parsnips, carrots, mangels and ruta baga, ready as soon as possible and in the highest condition, and sow between the 10th and 20th all the above, except the ruta bagas, which should be sown about the 10th of June.

PASTURES.

Let your pasture for the summer get well set in grass, and the clover nearly in bloom before you turn your stock on, if you possibly can do so, as otherwise the pasture will be poor all the year.

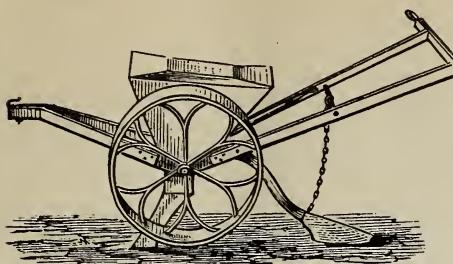
As promised, we would call your attention to a few implements that are just now in daily use, or are needed for good and expeditious work on every farm.

For getting newly turned sod-land into nice order, but few implements can be more relied on than the BAYLISS PATENT WHEEL HARROW.



See advertisement in this number. We have seen its operation in the North, and can vouch for its many excellencies.

We also give a cut of a new Corn Planter, Bean and Pea Drill, invented by a Baltimore mechanic, —Mr. E. D. Hallock.



Its low price and simplicity and its regularity in performing its work, recommends it highly to all who wish labor-saving machinery. Its inventor is well known to implement makers, as an ingenious, competent mechanic, and he claims in his advertisement that it "opens the furrow, drops the grain in any quantity desired and covers in one operation. It deposits in hills 4 feet, 2 feet, 1 foot, 6 inches or in a continuous drill as may be required. It certainly is equal to, if not better than any corn drill we have seen, for the price, \$12 only.

Deer Creek Farmers' Club.

INFLUENCE OF FOOD UPON STOCK.

The regular monthly meeting of the Deer Creek Farmers' Club took place at the residence of Mr. Wm. D. Lee, on Saturday, April 5th. The subject for discussion was, "The Influence of Food upon Stock."

S. M. Lee remarked that man is said to be found in the highest perfection where wheat grows to its greatest perfection. The influence of food upon stock is marked. Without food of good quality the best animals, from the purest strains, deteriorate and become unshapely. Many years ago one of the first Durham bulls was introduced into this county. The food and care he received were so different from that to which he had been accustomed, that his stock fell into disrepute. He had seen hogs from stunted varieties, worked up, by good feeding, independent of the introduction of what are called good breeds, into good animals. He had also seen improved breeds deteriorate from want of care. Farmers have depended too much on the purity of breed alone. There must be increased care, a better quality and abundance of food to keep up the standard character of improved stock.

Judge Watters said he believed in good feeding if you have good stock, and he regarded good feeding more necessary, even, than good stock. First, they must have good grass. Young stock should be fed on bran and oats, particularly oats, which

makes muscle. To fatten cattle, corn is best, but for growing cattle, oats are better. He did not approve of clover except as hay, than which nothing is better.

As being connected with the subject, Judge Watters asked the club if orchard grass would make a permanent sod. A desultory conversation sprang up, many of the members being of the opinion that it would not form a close sod, and if not pastured closely will grow up in bunches.—Mr. Janney thought it the greatest grass that grows, and agreed with Thos. A. Hays that if three bushels of seed were sown to the acre it would make a close sod. Mr. Rogers said it grows from where it is cut off and is affected by dry weather less than any other grass. George E. Silver said it starts earlier and lasts longer than any other grass. Mr. Moores said that in seeding 20 acres, one-fourth of it in orchard grass would be all a man would want. He would not mix the orchard grass with clover and timothy, as it would not make close sod. By having it separate, as it starts early, your cattle have the advantage of it before other grasses start. He thought it would make the land poor. S. M. Lee thought it was not as rich as other grass.

The regular discussion being resumed, John Moores said that it takes corn and grass to fatten cattle. He was not disposed to attribute so much to the influence of food, and mentioned the case of a neighbor who always raises fine colts and never feeds them any grain. That fact appeared to upset a theory he had held that colts must have oats to make muscle. He had once thought that by feeding cows to their full capacity you would get more butter; but had discovered that it was a mistake. He had made more butter by feeding them corn, oats and bran, a little less than they will eat. Bran will increase the quantity of butter.

Geo. R. Glasgow thought that with better feed, both winter and summer, stock ought to improve.

Johns H. Janney read some analysis, showing the relative value of corn, meal, bran, oats, clover hay, timothy, &c., for forming fat, flesh and muscle.

William Webster thought any animal would improve by proper food and as much as it would eat without over eating. In raising calves they should have as much milk as they will drink, and at four weeks old a spoonful of cooked corn meal in their milk. The amount should be increased as they increase in age and size. The same with horses.—After an animal arrives at maturity it does not need the same kind of food as when growing. Hay fed with corn will fatten cattle better than fodder or straw. York and Lancaster county farmers

keep their cattle as closely as possible in stables, sometimes even carrying water to them, keeping their stomachs full. Not so with young stock. If fed too much at a time they will become pot bellied. If young animals are fed regularly they will not eat too much at a time.

Mr. Janney remarked, in relation to feeding calves on milk, that he had seen an analysis of unskimmed milk, of skimmed milk and of oil cake, and by placing oil cake in skimmed milk it restored all the elements taken away in the cream.

Thomas Lochary said stock ought to have as great a variety of food as possible to make them healthy and thrifty. The more he used clover hay the better he liked it. Feeds calves raw meal as soon as they will eat it.

A member asked if there was not danger of scouring, with raw meal. S. M. Lee replied that there was not, if fed in small quantities.

Thomas A. Hays said he believed in the best feed and would first take clover hay, cut and put up at the right time. But he liked a change. Then good fodder; then oat straw and timothy. Orchard grass mixed with clover makes good hay.—Is feeding his cattle on pure corn meal and never had cattle do as badly. He did not think it was from the feed, however. They will do better with one-third bran mixed with meal. He did not think cob would answer in place of bran. The pure meal was too rich. Some farmers think fine meal important, but he had found that cattle relish coarse meal and do better on it. You must feed differently for different purposes. Feeds his cows two-thirds bran and one-third meal, besides roots.

Geo. E Silver thought food had great influence on stock. You can feed too little as too much.—You can feed to fatten, for milk, or for muscle. A milk cow should not be fed as you would feed a fattening steer. It is an admitted fact that corn will fatten, but it don't make milk. Bran is better for that purpose. The practice among dairy people of feeding slop, encourages disease among cattle.

James Lee feeds cattle meal, fodder hay and oat straw. Is now feeding corn and cob meal to 45, giving them from 5 to 10 lbs. each a day. They would eat twice as much if permitted. They are doing well. They get fodder in the morning and hay at the middle of the day and in the evening. Mr. Lee said he was convinced that coarse meal is better than fine.

Mr. Glasgow remarked that it appeared to be an open question whether meal should be fed coarse or fine, and knew several good farmers who preferred it fine.

Wm. MunnikuySEN thought it important to have good food and feed judiciously. He did not like cut hay or straw for horses, on account of its tendency to give them colic. It is a good plan to dampen oats a little. It lays the dust and prevents horses from choking. Soaks corn when hard. If a little bread soda is thrown on, it will never give horses colic. The same with green corn. Soda is much better than salt. The latter makes them thirsty; they drink too much water and get the colic. Chop should always be fed very carefully. In the plowing season he has had horses gorged on it, and it has given them the colic.

James H. Ball said he differed with some of the members, in regard to feeding beef cattle and cows. If he wanted to make a quantity of milk he would not feed on slop or bran. For butter yellow corn meal is better than anything else. It makes butter of better color than white meal. In the vicinity of New York thousands of barrels of swill are fed to cows every day. It makes an immense quantity of milk, but does not add to the health of the animal or cause it to put on fat. Where pigs are fed on whey, as cheese factories, they will grow in flesh, but their bones won't grow. Often their bones are not strong enough to sustain the weight of their bodies. In regard to feeding corn meal during the plowing season, one spring he fed it to his horses very heavily, and they became so stiff in their joints as almost to fall down. To get the full benefit of corn and cob, they should be ground tolerably fine. He never knew a steer to get off his feed when corn and cob were fed dry together.

R. John Rogers said his experience in feeding chop was opposite to that of Mr. MunnikuySEN. He was decidedly in favor of feeding it to his horses when regularly at work. They should have it once a day at least. Cattle do better when fed on that which they most relish. A change of food is therefore advisable. Mr. Rogers said that where many horses are kept, it is customary to feed a great deal of chop.

Mr. Ball was opposed to feeding chop to horses, as cutting hay or straw sharpens the points of the blades, causing injury to the intestines. He had known horses to die from the use of it.

Wm. F. Hays, (the Secretary,) thought that grass dry or green, is the most substantial and the natural food of stock. Other food is artificial.

Silas B. Silver said the character of food had great influence, especially on young stock. Small stock—pigs, calves, sheep, lambs, &c., when young should be fed gradually, and the amount increased all the time. Too little is a great loss, and too much almost as bad. We ought to feed for cer-

tain purposes. Oats is good to make muscle, but corn for fat. He feeds for milk principally, having many sheep. If he could obtain it, would feed during the winter on rye, as it is the cheapest feed for ewes, to make milk. He also feeds turnips, preferring the Yellow Aberdeen. Sheep and lambs will stand stronger food than most animals. They digest all they eat. He feeds his ewes whole grain, and for the lambs cracks the corn, sifts the meal out, and feeds the cracked corn alone. They will not do so well on oats. He recently noticed that his lambs appeared to be off their feed, and gave them a little salt. The next time he fed them they ate the same quantity they had been eating. We should feed according to what we want to produce, beef, muscle, or fat.

R. Harris Archer (the President,) favored coarse meal for work horses, but would have them fed on anything they would do well on. Would give a man charge of them, and make him responsible for their appearance. If he wanted chop, he could have it, or if he wanted to feed on soaked corn he might do it.

The committee of inspection, Messrs. Janney, Silver and James Lee, reported on the condition of the stock and premises. They especially commended a fine yoke of oxen, and noticed some good Berkshire and other pigs.

Messrs. Janney, James Lee, Lochary, George E. Silver and Thomas A. Hays, the committee appointed by the club to examine the contrivance, invented by Judge Watters, for fastening and unfastening cattle in their stalls, made the following favorable report :

"A NEW FASTENING FOR CATTLE."

Hon. James D. Watters, Judge of the Circuit Court for Harford county, has invented and received a patent for an exceedingly useful contrivance for fastening and unfastening cattle in stables. He has it in practical use in his stables, where it works with perfect success. A committee of the Deer Creek Farmers' Club recently made a thorough examination of the invention, and at the last meeting of the club submitted the following report:

The undersigned committee, appointed at the last regular meeting of the Deer Creek Farmers' Club, to examine the mode of fastening and unfastening cattle in their stables, recently adopted by Judge Watters, ask leave to make this their report :

We have made a thorough examination, both for our own satisfaction and for the information of brother farmers who may be interested in the matter. We find the contrivance used by Judge Watters entirely unlike all the modes of fastening

cattle which we have ever seen, but it is very simple in construction and comparatively inexpensive.

The first advantage which we would remark is that it works with absolute certainty ; that is when a steer is fastened, it would seem to be impossible for him to come loose by accident, and when the lever is moved to unfasten them, it is absolutely impossible for any one to remain fastened.

The arrangement is durable with nothing about it liable to break or get out of order. When once put into a stable we see no reason why it should not remain in perfect working order as long as the stable lasts.

We first unfastened a few steers singly, and find that cattle fastened by this mode may be unfastened separately with much greater ease than by the usual method. Then by using a lever on the outside of the stable we unfastened ten at a time, in one second or less,

The great advantage of such a contrivance in case of fire is of course apparent, because with it one might often save his stock, when without it all or many would most certainly perish.

But we think that even as great or greater advantage than this is the great facility of fastening and unfastening the stock in every day use.

The contrivance is adapted for either horse or cattle stables, but we think it peculiarly useful for cattle stables.

Considering it in every respect, we believe that this little invention will prove very practical and useful, and that as soon as it becomes generally known it will entirely supersede all the usual methods of fastening cattle in the stables."

[The above excellent report of the proceedings of this enterprising club is taken from the *Bel Air Egis and Intelligencer.*]

For the Maryland Farmer.

The Grange Movement.

Editors Maryland Farmer.— This organization which in 1873-74 seemed likely to carry all opposition before it ; which comprised in its membership about 2,000,000, male and female agriculturists ; has not, as many people seem inclined to believe, given up the ghost, and from all the information I can give it, is neither in a sleeping or dormant condition. The eclat of organization and the flourish of trumpets that ushered in the movement and were naturally attendant upon its unprecedented growth, have passed away, because they are no longer useful. And having ceased to be a nine days wonder, the organization has quietly taken its place among the institutions of the

country and is successfully working out its aims and purposes. The

OBJECTS OF ITS FOUNDERS

have been greatly misapprehended, not alone by the mercantile community at large, but by many of its members. That it was to antagonize the existing laws of trade and upset business generally, was what its enemies most wished to impress upon the world, and I do not hesitate to say many of its members were equally ignorant of its true objects. The order proposed to accomplish a few practical common sense things, based upon sound political principles, and calculated to ameliorate some of hardships borne by the farmer, and while advancing him, to advance the welfare and prosperity of the whole body politic. To accomplish these laudable objects, it was proposed that "Granges" or clubs "bound together by the fraternal tie of agriculture," should be organized in each neighborhood, the members to labor to elevate themselves socially and educationally.

Socially, the Grange has proved a most attractive medium for pleasant monthly neighborhood meetings, where ladies and gentlemen meet to renew friendships, talk over neighborhood and farming affairs, and thus by bringing together the rough diamonds to *educate* and elevate them.

Educationally. Like agricultural clubs, the Grange has accomplished much, the improvement in agriculture since its inception has been wonderful. An improved system of farming has become very general; a desire to learn how to farm more economically and profitably have been but one of the educational features of the order.

Politically. All discussions of a religious or partisan character are ruled out of the Grange by its fundamental laws, but it still reserves as its right the privilege of discussing all questions of political economy, which involve the highest rights of American citizenship.

Considering their strength in the voting community, does it seem strange that farmers should as *farmers* "demand by their votes at the polls," representation in the State and National Legislatures by men of their class, and identified with their interests? The Grange while not at all partisan in its purpose, propose to elect the best representative farmers to office instead of the class of men, who for the past twenty years have so wilfully and ruinously mismanaged public affairs, in doing so, certainly the change cannot be much for the worse.

Its business or trade feature has probably been misunderstood and caused it greater abuse than anything else. What the order proposed to do, was simply to try and reduce the prices of farm supplies in the following practical manner. To club the

orders of the several subordinate Granges until they grew to such proportions as to entitle the agent representing the Granges to purchase in large or wholesale quantities—thus becoming wholesale purchasers. 2nd. To buy for *cash*, thus to discountenance the ruinous credit system, which is rapidly bankrupting the country by inducing people to become genteel thieves, by buying goods for which they know they will never be able to pay. And by carrying out these principles to receive all the advantages of *cash and wholesale buyers*.

This is a plain statement of the practical workings of the Grange. Subsequent articles will be devoted to exemplifying how these various objects have been carried out and their results, especially in Virginia, (the writer's home) and how by strictly adhering to the principles enunciated by the order, the farmer may protect himself against oppression and at the same time do much to advance the welfare of our whole country.

VIRGINIA PATRON.

For the Maryland Farmer.

North Carolina and its Resources.

In the first place, our State is so long, 485 miles from east to west, with one end down in the tide water and the other elevated upon the highest mountain east of the Mississippi river, with temperature ranging to such extremes, and soil and products varying so much; with products filling the whole list mentioned in the U. S. reports. I will not attempt to cover the whole ground, but mostly confine my remarks to things in central North Carolina.

Our merchants and tradesmen would make believe times are dull and business depressed; our farmers who are in debt think so, for they bought, when prices were higher, and to pay with produce, and property depreciated, does not leave them with as much surplus on hand as when the purchase was made; lands that before the war held at \$10, now sell under the hammer at \$2 and less. At private sale fair lands can be bought in this county at two to four dollars, within 10 or 12 miles of this place. Of course the best lands are held at 8 to 15 : produce in proportion.—Hay 40 cents, corn 60 cents, flour \$5 to \$6, bacon 7 to 9 cents, &c., so you can easily see the impossibility of realizing enough money to pay an old debt contracted, when stock cost double what it is now worth.

Still, notwithstanding these difficulties our section is prospering, the farmers have many more conveniences now than formerly; they have more improved implements, more painted houses to be

seen in travelling along the woods, more grass plots, more roots raised—yes I doubt if it would be an exaggeration, were I to assert that this county produced more beets last season than was ever raised in the whole state in any one season before the war; and grass seed is used every year more and more. I have myself over 50 acres of orchard grass. Such a thing was unknown in this section 20 years ago. Orchard grass seems to suit our soil and climate admirably; I know of one orchard in this county that has been standing in what was known as "dog foot" for over 40 years, and has been used all the time as pasture, never been turned in the whole time, and last year had a good stand. Clover does well on the more improved lands, but orchard grass will produce more than any other crops I know of. Two to three tons per acre for land that costs from two to twelve dollars per acre, is no bad investment. I believe there is more profit here now in farming than in any other branch of business, and yet three-fourths of our lands are for sale. The farms used to be too large is one cause; another is bad farming and extravagance, and then our young men of intelligence want to go to the cities and clerk, with the wrong impression that it is more honorable to be ordered around by some merchant than to remain on the old homestead and be master of themselves—the one is *solid* comfort and plenty, honorable, independent and manly, the other is all *glitter*, a hollow, governed, dependent life of servitude—failures!

Is there no way of informing the youth and also educating them? For soon as they get an education now, it seems to take from them common sense. Your city now has hundreds of our best men who left good homes, better climate and fertile soil, when with half the exposure and labor they might to day have been the owners of a comfortable home, with every thing around them, inviting to old age. Whereas, they are now as dependent on their month's salary as they were when they first entered city life. No section surpasses ours in the inducements for intelligent youth to enter agriculture. *I want to say, here, I am not a land agent, nor have I any land for sale.*

Until since the establishment of our Agricultural Department two years ago, we knew nothing of chemicals and the manipulation of our own fertilizers, nor did many know how to utilize the home made manures, and no idea at all of the real value of commercial fertilizers. We are now improving and have among other manufactures two bone mills in this county, where the bones are stamped into dust and sold to us at 2 $\frac{1}{4}$ cents per

pound, and if some scientific friend of yours would tell us what we can add to that dust to make it a better fertilizer for our crops of grass, corn and wheat, at a less cost, we shall feel obliged, and I will think that I have accomplished much for my neighbors.

I was born and raised here, and feel more interest in the prosperity of this State than it is possible for you to feel, nevertheless I appreciate your kind sentiments and feel that yours is a Southern sister if you were not on this side of the line; although I never "fit, bled, nor died" for the cause of slavery. Respectfully,
Guilford Co. N. C.

D. W. BENBOW.

The Beet Sugar Interest.

Having been the first Southern Journal to advocate the importance of growing and manufacturing beets into sugar, as likely to prove a highly remunerative "new departure" from the old ways of our farmers, and a new field for capital to reap large and sure dividend on investment, we hail with pleasure the initiatory steps taken in enterprising Harford county, Maryland, as will be seen from the following report of a meeting we find in that excellent Weekly—the *Aegis and Intelligencer* of Bel Air.

"At a meeting of farmers, held on the 5th of April, at the house of C. C. Kinsey, in the interest of the sugar beet industry, W. A. Heaps was called to the chair, and W. Scott Whiteford elected Secretary. R. B. McCoy being called upon, produced a number of interesting documents on the subject, which were read; also a statement of cost of a factory that would make one ton of sugar per day—showing that after paying first cost for factory and beets for one year, would have a balance of \$9,710 to be applied to labor and the manufacture of sugar from the beet.

A proposition was submitted to the meeting to raise the capital stock for a company, to consist of 750 shares, at \$20 per share, which would give a working capital of \$15,000— one third of each share of stock may be paid for in beets.

On motion, a committee was appointed to correspond with the Maine Sugar Beet Company, in relation to the drying process of beets and cost of machinery for same. Nearly all the farmers who were present are going to plant beets.

On motion, the meeting adjourned to meet at the house of R. B. McCoy, at 2 o'clock P. M., on Saturday, April 19th, to which meeting all are invited that have an interest in this great industry. W. Scott Whiteford, Sec'y. W. A. Heaps, Pres't.

Beet Sugar in Delaware.

A company to be known as the Delaware Beet Sugar Manufacturing Company was organized on Tuesday afternoon, April 1st, and the following gentlemen elected directors: George G. Lobdell, William G. Gibbons, Lea Pusey, George W. Bush, William G. Pennypacker, George W. Stone and Alfred D. Warner. These gentlemen elected the following officers of the board.

President—George G. Lobdell,

Secretary—George W. Stone,

Treasurer—Alfred D. Warner.

These directors will serve until the first annual meeting, which will be held upon the 23rd of next September. The board of directors will meet monthly for business.

The company has not yet started the erection of factory buildings, but will locate in Wilmington. It is not necessary to build the factory until the first crop of beets is raised, which will be sometime in the month of September.

The company intends manufacturing brown sugar from dried beets, using only such green beets as may be grown contiguous to their factory. By dried beets is meant that the beets shall go through a process similar to that used in drying peaches. In drying beets, five tons of the green vegetables are compressed into one ton. The green beets contain about 10 per cent. of sugar, and at the same ratio there would be 50 per cent. in a ton of dry beets. Another advantage derived from the dry beets is that it does not require evaporation.

The company has a large supply of seed on hand, which they sell at reasonable prices to any one who wishes to purchase it. The seed now in the hands of the company is the German Imperial beet seed, the same which produced the best results in this State last year. The company will contract with the fruit drying establishments down through the State for their dried beets, and the dryers in turn contract with the farmers to grow the beets for them.

It is the intention of the company to work 50 tons of green beets per day, which would turn out five tons of sugar per 24 hours. They will not refine the sugar, but will sell it to the refiners for that purpose. The company propose to have taken \$10,000 more in stock by Wilmington parties, and they desire to keep the matter confined to Wilmington. Subscription books are in the hands of George W. Stone, Secretary.

If this experiment is successful it will doubtless develop the peninsula in fertility just as it has France and Germany in those districts in which the beet was grown. The fruit dryers are a class of people who will be benefited by it, and they

will find material to work upon from September, about which time fruit drying ends, till April, a space of six months, during which time they have very little to do. Applications have been already received from dryers for furnishing the company with beets, but it is not the new corporation's intention to go into the business very deeply this year, until they know better by experience what it is.—*Every Evening, Delaware.*

[We hear from good authority that Mr. Gennert is about to visit California, to superintend the erection of a beet sugar factory. Some parties in that State intend to enter upon the business on a large scale. How long is it to be before Marylanders will engage in this new and great national enterprise?]



SUGAR FROM BEETS.

The sugar trade of the United States amounts in value to \$81,000,000 annually. The first beet sugar was made in Germany in the beginning of this century. It has expanded very rapidly during the last thirty years. There are now about fifteen hundred beet sugar factories in Europe. Twenty square miles are planted with sugar beets in Germany alone.

For successful beet sugar making are required, first, the best varieties of seed; second, good tilage; third, proper fertilization. Under these conditions success is possible over all the northern States. A good sugar beet should contain at least twelve per cent. sugar, and as little else as possible. A mellow, deep, rich sandy loam is the best for sugar beets. A heavy clay soil is unsuitable, also a rich virgin soil, full of vegetable matter in an undecomposed condition. The beets should not grow too large, a weight from one to one and one-half pounds each is the best. The best yields of sugar run up to six, seven and eight thousand pounds to the acre. The average yield is from eleven to seventeen tons of beets, giving from eighteen hundred to three thousand pounds of sugar, besides molasses. The molasses is not fit for human food, but it is either fed to stock or distilled; after distillation the residue is evaporated and potash salts extracted. One factory alone in Germany making two hundred thousand pounds of saltpetre from this waste substance. The leaves of the beets may be packed in pits, covered over, and kept for winter feeding. Their value is estimated at about six dollars per acre. In addition to this the beet-cake from the factory, left after extracting the sugar, amounts to about four thousand and seven hundred pounds per acre, worth for feeding purposes about sixteen dollars. With a proper rotation of wheat, beets, fodder corn, bar-

ley, wheat and beets again, with moderate fertilization for the wheat and fodder crops, the land is kept in good heart and the fertility increases. A sugar factory can be built for \$25 000, capable of producing fifteen thousand pounds of refined sugar a day. Sugar beets at a distance from a factory can be dried by artificial heat at a small cost, and will then keep any length of time without injury, and are transported at a cheap rate.

The leaves and beet-cake fed together with a little hay make excellent feed for dairy cows, giving a good flow of milk and communicating no bad flavor to the milk or the butter.—*Prof. Englehardt's lecture before the Vt. Dairymen's Association.*

GARDEN WORK FOR MAY.

There will be enough work to keep the gardener busy this month. Attention must be directed to the plants in the cold frames, in setting out lettuce, cabbage, tomato and egg plants; sowing more peas, cucumber, squash or symblin, endives, spinach, radish, &c. Planting corn, ochra, Lima and other pole beans, melons, canteloupes and string beans for succession; dressing and manuring strawberry beds before the plants flower. Be sure and plant a full supply for the family of the delicious sweet potatoes,—the Nansemond is the best sort. If you have no roots already sprouted purchase one or two hundred plants.

Carrots, Parsnips and Beets.—If not already planted and up, plant these at once, or plant some for succession.

Peppers.—Sow seeds in a well prepared bed early in the month.

Salsify.—On a rich, deeply prepared bed, sow salsify as a necessary appendage to the list of winter vegetables, that is liked by everybody. Do not let them suffer for water.

Cabbage.—Toward the last of the month prepare a rich bed and sow cabbage seeds. Sow American Drumhead Savoy; Flat Dutch, Winningstadt and Brussels sprouts. Sow some seeds of red cabbage for pickling and for slaw.

Dreer's Lima Beans are now acknowledged to be the most productive and best eating bean of that class.

We have found the Mammoth Sugar Corn and Hyde's Egyptian Sugar Corn the two most prolific and delicious varieties for late roasting ears.

No garden should be without a supply of Black Mexican Beans, for winter use as soup beans, furnishing, when cooked according to good recipes the nearest approach to turtle soup, of any article that ingenious cooks have yet discovered to imitate that grand Aldermanic soup.

Nasturtiums, ought now to be planted; the climbing sorts set near a trellis.

Have ready trellises for tomatoes, cucumbers, nasturtiums and squashes as Turks' cap and such other vegetable vines as are known to do best on trellis or bushy branches, like the cedar, pine and beech.

Those who like a large, iich pea, should sow the Champion of England, and support them with sticks of the beech, 6 or 7 feet long, with many side twigs on which this vigorous, tall growing pea can fasten its tendrils.

For the Maryland Farmer.

My Manure Pile.

Messrs. Editors:—

Long since having been convinced that no organic matter, animal or vegetable, is plant food, or to express it in other words that no organic matter produces organic matter through the usual process of growing plants, but must first return to an inorganic condition. I now propose to comply with my promise in my last article to state how I have treated my manure pile for the past three years with entire satisfaction and intend to follow it as long as I control it, or at least until I find a better plan. Early in December when feeding commences and proper protection to it has been secured by a good roof of corn fodder to keep off the rain and snow, a good bed is started with straw and sea ore, being on the Bay, the latter costs nothing but the hauling. On this from day to day the manure from the stalls (for every head is provided with comfortable dry and warm quarters) is placed, and when two or three feet high the fermentation commences and the proper heat obtained. In a few days the manure gradually sinks by which time a fresh supply of manure has accumulated. This is added to the pile and keeps up the necessary action, using corn stalks, straw and the usual coarse stuff of the barn yard, always following it by the horse manure made from hay and grain.

This plan is pursued until spring or until hauling out time comes; by then, the bulk of the manure is reduced to an almost black powder, much of which could be drilled, being free of water by the long heat and much of the coarse stuff (organic matter) destroyed and passed into the air in the form of carbonic acid, water and ammonia, leaving the mineral matter behind with the charcoal or carbon, the latter by the absence of air not being consumed. When my corn ground is plowed and ready for the harrow, the manure is hauled out, spread and harrowed in. By this process the bulk is wonderfully decreased. I have no water to

haul, hence much labor and horse flesh saved, and have a concentrated manure, easily managed and turned in, and return everything that was taken from the soil, and what passed away was simply what had been furnished by rain and air and had returned home ready for another trip from inorganic to organic. During the cold weather of last winter when the thermometer indicated 20 degrees two feet from the pile, the temperature one foot below the surface of the manure the same instrument rose to 75 degrees, showing that notwithstanding the cold outside, the slow oxidation or combustion was going on within, and this is just what I wanted. The pile is about 12 feet by 50, without proper protection from the cold, rain and snow, it will be impossible to maintain the fermentation during winter, and in that case most of the manure would come out in spring, as it went in, corn stalks, straw, &c. in their normal condition, giving bulk without quality, and must rot in the soil before it can be of any use to the growing crops except the portion the animal had mineralized, i. e. changed from organic to inorganic. If the land is of that unfortunate nature, stiff, tough, clay, impervious to air and water, undoubtedly the more coarse stuff such as I have spoken of, you put in it to change its mechanical condition the better, so the air, water and heat may circulate and carry to the roots these all important elements, especially for a corn crop, which requires them all in abundance, and before the sun gets too far on his Southern trip. Such land, however, is unfit for corn, and I was going to say for anything else but brick yards, but I recall it, for I have some such and may find time to give you a short paper on how I have doctored it, and now produces finely of timothy, clover and red top.

In conclusion, my motto has been with manure quality and quantity unlike the politicians seeking voters who desire quantity without regard to quality.

A. P. SHARP.

For the Maryland Farmer.

Agricultural Statistics.

Upon the resolution of Senator Davis to promote agricultural interests, Senator Paddock of Nebraska, brought out some facts, both interesting and instructive. Quoting for his text from "What I know about Farming," he endorses the late Horace Greeley, in his estimate that \$100,000,000 is doubtless too small an estimate for losses by insects during the year. The cotton worm in 1874 cost the country \$20,000,000 in a single week. The chinch-bug in 1871 cost the Northwestern States \$30,000,000, and in 1874 the loss was double. The Rocky Mountain locust in three successive years,

1873, 1874 and 1875 cost \$200,000,000. Professor Riley, who has spent some years among these insects of the West, estimates that \$300,000,000 would not cover the loss of these ravages. Diseases among swine swell our losses to \$30,000,000 more. Professor Low, of Cornell University, estimates that we have 90,000,000 head of farm stock, averaging \$2,000,000,000 at the mercy of plagues.

Fully that amount has been lost in the various countries of Europe. These figures speak eloquently for remedies. The Government must take hold of these questions; it must develop preventives and protect capital thus invested. The Senator took up also the forest question, and showed some figures worthy of record. Health, as well as material interests of our country, demands that we should look seriously into the matter. The old world, by bitter experience, had learned that it was not safe to rage war against the forests, and hence there is now a Governmental protection, which the country must learn to imitate.

There is a direct relation between plants and animals, which man ought not to be permitted to disturb. The carbonic acid breathed out of millions of lungs must find vegetation and foliage to drink it in, or it will become a dangerous factor in the spread of diseases. Forests modify our temperature, and their total destruction leads to barrenness and desolation. The consumption of wood in this country is enormous, and unless tree planting be resorted to, our fences, ties, lumber, building materials and fuel will leave us a woodless expanse, at the mercy of winds and howling tempests. With over 80,000 miles of railroads, the number of ties annually required is not less than 150,000,000, which requires 80,000 acres of timber to furnish them. The fences of this country cost \$1,700,000,000, with an annual outlay of \$198,800,000; our telegraph lines use two million trees.

The Senator wants to see the sphere of the Department of Agriculture enlarged. The Signal Bureau, different geological surveys, all that relates of geology, meteorology, mineralogy, fisheries, all should come under its jurisdiction. He suggests further, that a National Academy of Agriculture, similar in its features to West Point Military Academy be instituted, where graduates can be sent out to the different Agricultural Colleges of the country. One more difficulty meets the farmer of the West: a market and transportation for his productions. He suggests a great national trunk line or a ship-canal to connect with the great lakes and rivers of the West. Our high duties upon products of South America have driven those articles to England. He thinks a free trade the surest and most successful for all concerned.

Truly, J. D. WARFIELD.

Live Stock Register.

For the Maryland Farmer.

OUR EUROPEAN LETTER.

Messrs. Editors:—My final letter will include a description of two visits made respectively on Friday, Dec. 13th and Monday, 16th. Accompanied by one of the ladies of my party, we took an early train for Windsor, and upon our arrival at the station we took a Hansom for the Queen's Norfolk Farm, to visit Mr. John Brebner, who has charge of both the Norfolk and Flemish Farms. He informed us that he had lived sixty years on the one or the other of the farms of the Crown. We were most hospitably received by Mr. B., his wife and daughter, after a ride through the Windsor Park of upwards of five miles. My special object was to purchase for Mr. Frank Brown, of Carroll County, a young Devon Bull, to be used upon the splendid Springfield herd (of late George Patterson) now the property of Mr. Brown. Accompanied by two of the ladies, we began our inspection of the Devons, by having a splendid five year old turned out, the "Duke of Connaught," he was bred by Walter Farthing, (whose reputation as a breeder is second to none in the kingdom), then his very promising son, a yearling, for whom I speedily bargained, and at Mr. Brebner's suggestion gave him the name of Prince Leopold. We then examined a beautiful yearling, half sister of the Prince, she had been a winner at the French Exposition last summer.

Mr. Brebner informed us that the Queen took a lively interest in the stock, and the standing instructions are that when there is an award made at any fair in her favor, the fact is to be immediately telegraphed. In our rambles we came across a beautiful pair of shepherd puppies, one of which Mr. Brebner kindly presented to one of the ladies of my party. Upon being ushered into the cosy parlor at the Norfolk farm house, we found the walls ornamented with likenesses of the Royal family, and upon the table the several volumes of the life of late Prince Consort, on the flyleaf of which was, in the hand writing of the Queen, presented to John Brebner, Esq., by Victoria; added to one of the signatures was "Empress of India."

After partaking of the kind hospitality of our friends, and upon condition that my whole party should, not only visit the Norfolk farm in the spring, but also the Windsor farm, including the Queen's dairy, were we permitted to reseat ourselves in the Hansom to drive to the Flemish farm, en route to railroad station. This farm was

a specialty of the late Prince Consort. The farm buildings are comparatively new, and were built under his direction. The cattle here are Herefords, including many very fine specimens. We passed by a tree which is preserved by a substantial enclosure, by order of the Queen. From a limb of this the late Prince Consort shot his last bird in November, 1861.

Our next trip was to Streetly Hall in Cambridge, the home of Mr. Henry Webb, eldest son of late James Webb, and propose giving a brief narrative of the Mr. Webb's connection with the Southdown sheep. He was born on 10th November, 1796, at Streetly Hall, and established himself at Brapham in same county in 1822, and then specially turned his attention to the breeding and improvement of Southdown sheep. Mr. Webb had already convinced himself, by experiments made while still at home with his father, that more mutton and wool of the best quality upon nine-tenths of the arable land in his section could be made from Southdowns. He was winner of prizes at the Royal Agricultural Society's show in Cambridge in 1840.

Mr. Webb soon found to make show sheep it was almost equivalent to sacrificing them, and never exhibited afterwards anything older than Shearlings. Having established his reputation, his rams were sought by breeders, and he let them upon notice, in competition, for the season. Upon one occasion the Duke of Richmond paid one hundred pounds and ninety-seven guineas for the use of one.

Mr. Webb sold out his stock in 1861-62—the sale realizing sixteen thousand pounds, six hundred and fifty-six, 14s. 6d., (£16,646. 14s. 6d.)

Jonas Webb died on his 66th birth day highly respected wherever known. A marble statue adorns one of the Squares in Cambridge, erected by his admirers in the kingdom.

Mr. Henry Webb now fairly represents the Southdowns of his late father. Although a severely cold day, a walk of nearly two miles was amply repaid by the inspection of his splendid flock. We first took the aged ram classes, or all above the lambs. Most of them had just been returned from the period of service. Mr. Webb continues that practice. Some of his rams are sent to the continent. From among these two excellent specimens were selected for the Park Commissioners of Baltimore to be used upon the fine flock at Druid Hill.

The class of rams and ewe lambs were as fine as possible, and a finer lot of aged ewes were never looked upon. While Mr. Webb does not believe in keeping old ewes, yet, for several

reasons he has kept them until well up in their teens. One bred sixteen lambs in as many years, and then went to the butcher. The latter tells this story, that the Vicar of the parish having sent for a specially good leg of mutton he was without other than those of this old ewe. One of those was sent, a few days after the Vicar stopped to compliment the butcher upon its excellent quality. How is that for old sheep!

In closing my letter, I think a real service can be accomplished for persons who may desire to make importations by giving the names and addresses of reliable breeders of cattle and sheep whom my opportunities in England justify me in vouching for.

DEVONS.—John Brebner, Norfolk farm, Windsor. Walter Farthing, Stoney Court, Bridgewater, Somerset. William Smith, Whimple House, Whimble, Devon. Tackman & Bickle, Hexworthy, Launceston, Cornwall. John Kent, Felpham, Bognor, Sussex.

HEREFORDS.—John Brebner, Norfolk farm, Windsor. J. Duckham, Bayham Court, Ross, Herefordshire. William Taylor, Showle Court, Ledbury, Hereford. J. H. Arkwright, Hampton Court, Leomister. Henry G. Corthom, 135 Brockley Road, Lewisham.

SHEEP.

LEICESTERS.—Thomas Morris, of Croxton; Ulceby, Lincolnshire; Lawrence Willmore, of Leicester. John Green & Son, of Lon, House farm, Silsden.

COTSWOLD.—Samuel Smith, of Somerton, Dodington, Oxon. Joseph Craddock, of Eastington, North Cash, Gloucester. Russell Swanwick, Royal Agricultural farm. Robert Jacobs, of Signett, Burrford, Oxon, Cirencester.

LINCOLNS.—John Pears, of Mere Lincoln. Charles Sell, of Bassingbourne, Royston, Cambridge. Thomas Gunnell, of Willow House, Milton, Cambridge.

SOUTHDOWNS.—Henry Webb, of Streetly Hall, West Wickham, Cambridgeshire. Lord Walsingham, of Merton Hall, Thelford, Norfolk. Duke of Richmond and Gordon of Goodwood, Chichester, Sussex. Charles Crawshay, of Attleboro', Norfolk. Hugh H. Penfold, of Selsey, Chichester, Sussex. E. and R. Emery, of Hurston Place, Stowington, Pulborough.

HAMPSHIRE, OR WILTSHIRE DOWNS.—Henry Lambert, of Great Abington, Cambridge. Alfred Morrison of Fonthill House, Tisbury Wilts. Richard Pocock, King of Southstoke, near Wallingford, Berks. James Read, of Homington, Salisbury, Wilts. William Parsons, of West Stratton, Micheldever, Hampshire.

SHROPSHIRE.—Lord Chesham of Latimer, Chesham, Bucks. Thomas Nock, of Sutton, Maddock, Shifnal Salop. Grimwood Cook, of Horseheath Park, Linton, Cambridgeshire. Henry Lovatt, of Loneshill, Bushbury, Wolverhampton, Staffordshire.

OXFORDSHIRE.—Albert Brassey, of Heythrop Park Chipping Norton, Oxton. Charles Howard, of Bidderham, Bedford. Nathaniel Page, Stilgoe, of Manor farm, Adderbury, Oxford. Jas. and Fred. Howard, of Britannia farms, Bedford.

I have made no reference to Shorthorn cattle being convinced that the States of New York, Ohio, Illinois and Kentucky contain now the best specimens of Shorthorns in the world.

I am very truly yours,

JOHN MERRYMAN.

Rome, February 26, 1878.

[This last foreign letter from our esteemed friend and correspondent will be found to be of unusual interest and of importance to the stock breeders of America, particularly to such as may wish to import fine stock from reliable breeders across the water. Before our readers will receive it, we hope Mr. M. will have returned from his European tour and in renewed health be "treading his native heather," at Hayfields, in Baltimore county.]

The Value of Thoroughbred Cattle.

D. Z. EVANS, JR.

There is far too much nonsense said and written in regards to thoroughbred animals, and it seems that the term is but indifferently understood by many in both city and country. We do not intend to discuss the term, as applied to horses, where thoroughbred, in the strictest sense, applies to running horses only, and trotting-bred applies only to trotters, but only as it applies to the farmers stock such as cattle, sheep, and swine, for they are of more real value to the entire community than are trotters or runners.

How much better are thorough-bred cattle than the best usually found on our best farms? is a question often asked. They are much better, on account of their ability to surely impress their good qualities on their offspring, this resulting from breeding, for many years, in a certain line, with definite purposes in view, until they become able to reproduce their kind with a regularity and with a resemblance to sire and dam, which certainly gives them the right to be claimed as thoroughbreds. This, common stock will not do to a certainty, and while we may occasionally find extra cows in a herd or even extra herds, they will

not reproduce or perpetuate the qualities to a certainty. And how were these extra animals produced? They were not a chance lot, gotten by coupling any common bull with any cow in the herd. Assuredly not, for they were obtained by a careful and systematic selection of the best breeding animals, and by the use of the best bull that circumstances or money could obtain. And in just the same way have the thorough-bred cattle been produced, with this exception, that it has been going on for very many years in the hands of breeders who knew their business and did it. Should not this then argue in favor of the thoroughbreds?

We do not advocate that farmers should have nothing but thorough-bred animals in their herds for the first cost is so great that but few could even think of it; but we would advise those who wish to improve their herds to resort to thorough-bred blood to do it, for it can accomplish much sooner, and with a greater certainty, than by using half-bred or common males. Very often, by coupling a thorough-bred male with a good, healthy, vigorous cow, you secure a grade or half-blood heifer which exceeds, in point of dairy qualities many a pure-bred cow. This does not argue against the pure-bred sire, as some very erroneously suppose, but decidedly in his favor, for no such good results would have been obtained from by the use of a common bred sire. It is due to the potent influence of the pure-bred sire that the decided improvements in the offspring has been secured.

As it is with cattle, so it is with sheep and swine, as well as poultry, and no farmer can afford to do without the great benefits to be derived from at least making use of pure-bred sires, if they cannot afford to have a few females of the same blood.

It is all well enough for some tillers of the soil to cry down pure-bred animals, but we have several times found them to be wanting in a belief in their expressed views, when they were gratuitously offered the service of some fine thorough-bred animal; and they would take especial care to have their best animals served. If there was no advantage to be gained, they would be morally sure not to let their favorite animals be contaminated.

THE HORSES.

There is no question in the minds of all who have had experience in the matter but that hay and oats makes the best feed for horses that are obliged to work regularly. If the hay is cut fine and the oats bruised or ground, the whole mixed or moistened, the animal will consume his rations faster than straw. Groom horses well, and allow

sooner, digest them quicker, and thus have more time for rest and renewing his power for labor. Farmers' horses that work but little during the winter season may be kept cheaper by cutting and mixing bright straw and hay in equal quantities, and adding a ration of strained potatoes or raw carrot. Colts should be fed liberally on good hay —bright clover is best — and bruised oats; give them a roomy box-stall in stormy weather and during the night. Litter freely and let the manure accumulate under them. Sawdust or spent tan-bark makes a good and convenient bedding. In cities and villages this kind of litter is often cheap—plenty of exercise every day. A good run in the yard is the very best kind of exercise, but care should be taken not to have any loose boards, stakes or anything of this kind lying round that they may step on or run against causing serious accidents. See that the stable floors or basements are sound and strong. Many a good horse has been ruined by breaking through the stable floor. Arrange the feeding racks so that dust or hay-seed will not fall into their eyes or manes. Many horsemen erect the mangers too high, thus compelling the animals to assume unnatural position while eating. Farm horses that are not to be used much during the winters should have their shoes taken off and allowed to run with the colts outside; it will be surprising how their energies will be renewed when taken up and fitted for spring work. The teams that are to be used during the winter should be kept well shod; and insist upon having them shod properly.—*Turf, Field and Farm.*

BALKY HORSES.

The Society for the Prevention of Cruelty to Animals recommends the following rules for the treatment of balky horses:

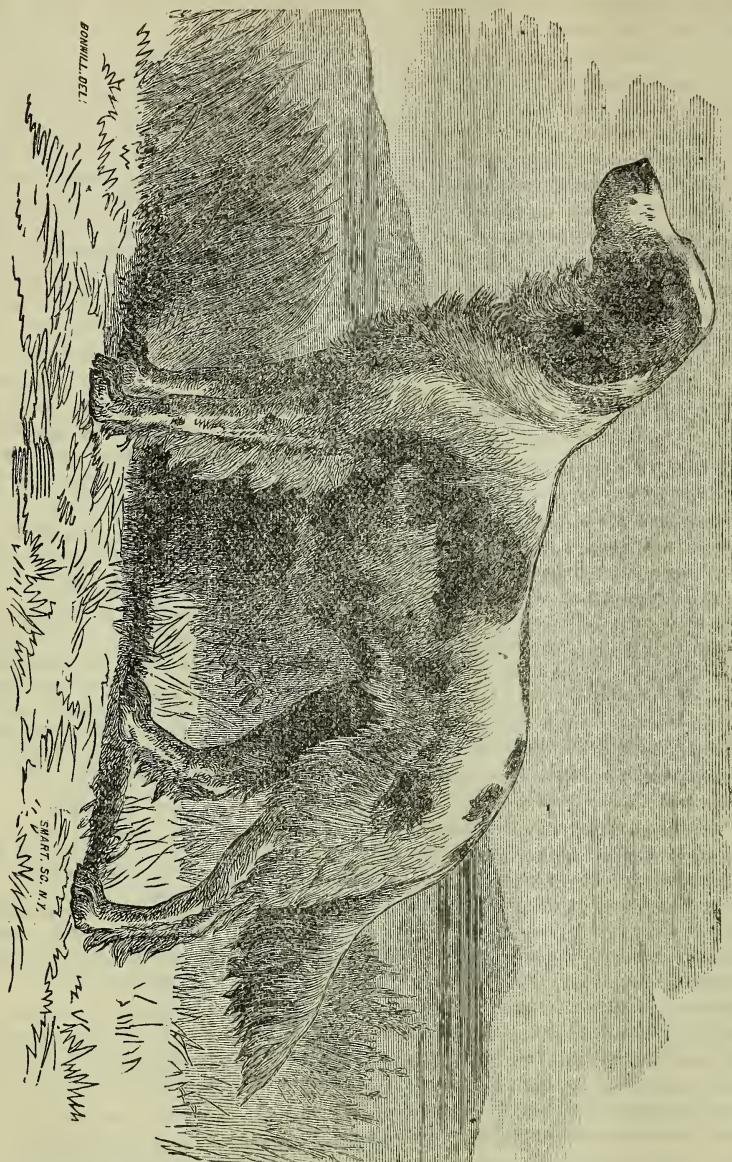
1. Pat the horse noon the neck, examine the harness carefully, first on one side then on the other, speaking encouragingly while doing so; then jump into the wagon and give the word go; generally he will obey.

2. A teamster in Maine says he can start the worst balky horse by taking him out of the shafts and making him go round in a circle. If the first dance of this kind dosn't cure him, the second will be sure to do it.

3. To cure a balky horse, simply place your hand over the horse's nose and shut off the wind till he wants to go, and then let him go.

4. The brains of horses seem to entertain but one idea at a time; thus continued whipping only confirms his stubborn resolve, if you can by any means give him a new subject to think of, you will have no trouble in starting him. A simple remedy is to take a couple of turns of stout twine around the fore-leg, just below the knee, and tie in a bow knot. At the first check he will go dancing off, and, after going a short distance, you can get out and remove the string to prevent injury to the tendon in your further drive.

"LARK" THE WINNER OF SEVEN PRIZES.



Lark the Winner of Seven Prizes.

The subject of our illustration is the successful and well known bench show dog, Lark, owned by Mr. Peter H. Morris, New York. Mr. Morris is an enthusiastic lover of the setter blood; and in the few dogs owned by him of this fashionable and excellent breed, his collections will compare favorably with those of any gentleman in this country, both as regards excellence in bench show or in

field trials. Lark, which is his favorite, is thoroughly field-broken, and is fine sized; color, orange and white, and about 25 inches high at shoulders. In color, beautiful, the orange being a deep, true orange, while the white is of the purest. His legs and feet are perfection, being light yet strong, like those of a thoroughbred. He has dark points. His head is nearly a perfect one.

For our illustration and description of the setter "Lark," we are indebted to our highly valued cotemporary, the *Fanciers' Weekly*.

SHEEP HUSBANDRY.

Aside from other benefits arising from sheep husbandry is the double advantage that accrues to the farm itself. First, in a manorial point of view : the sheep is an animal that voids its ordure more frequently than any other of the farm animals, and the same also of the urine, so that when the animal is at pasture this peculiarity gives a more equal dissemination of fertilizing material than comes from the pasturage of other animals. Sheep ordure is more concentrated than that of the horse, cow, or swine, and being dropped in a sort of pellets, it is no uncommon thing, in fields where sheep have a run, to see the droppings scattered thickly over the same. Another thing too, where the surface is uneven, hilly, or rolling, the sheep will feed upon the hill sides, so that as the rains fall upon the manure, its virtue, is carried, by the natural action of the water downward, and so where it was otherwise extremely difficult to fertilize partially barren hill sides that were almost inaccessible, and could not be fertilized by the ordinary means of cultivation or otherwise, sheep have been employed to the extent of producing a firm sod of white clover where almost entire barrenness before prevailed. It is believed by many that the abandonment of sheep husbandry is a principal cause for the gradual deterioration of pastures. But the advantage arising from the manure, is not all confined to pasturage ; the sheep, when properly cared for in the winter—which will be considered at some future time—will make considerable accumulation of manure, and if allowed to remain until used, allowing the flock to keep it tracked down hard, furnishes a powerful fertilizer ; but if disturbed by being thrown into a heap it very soon heats, and is believed to have lost some of its fertilizing virtue. But when desired is peculiarly adapted to use in making hot beds.

Among the English more particularly, the sowing of turnips is practiced for the purpose of fertilizing special fields, which is accomplished by keeping sheep feeding upon them as long as possible, or until the turnips are gnawed into the ground, and all excrement thus distributed over the field. Another mode considerably practiced is by using a movable fence, and keeping the sheep confined for feeding in as small a space as is convenient, and when sufficiently manured, move to another place adjacent, and so on until the required surface has been gone over with.

Many of the York State farmers find a good profit resulting from the purchase of sheep in the fall for the purpose of fattening upon the grain and straw grown upon the farm. This is believed

to be much more advantageous than selling the grain, because while a good percentage of profit came from the meat production on the sheep, another, and important advantage is in the greatly improved condition of the farm in increased fertility.

The second advantage to a farm from keeping sheep lies in the fact of their being acknowledged scavengers, and possessing a happy disposition of devouring and keeping down small bushes, weeds briars, which otherwise become noxious upon the farm. It is believed that one cause of the increased growth of bushes, briars and other pests in the pastures of New England, is attributable to the gradual abandonment of sheep husbandry. In Lichfield county in Connecticut, are examples that go to prove the correctness of the belief. There are pastures in which sheep are kept that are almost entirely free from a bush, weed or briar of any kind, and yet an adjoining pasture with the same apparent soil and natural characteristics, but which is pastured only by cattle and horses is covered with small and large bushes, weeds and briars of all kinds, which would surely indicate that sheep are efficient laborers in securing to the farmer, at least a partial freedom from some of these pests, which are so obnoxious, and which, at the same time, are difficult of eradication. These considerations offer additional inducements to average farmers to undertake the entering upon that special branch of industry, sheep husbandry.

Columbia, Conn.

WILLIAM H. YEOMANS.

For the Maryland Farmer.

Sheep Husbandry in North Carolina.

Pender County, March 31st, 1879.

Messrs. Editors:—There is no branch of rural industry in this State more promising of good results than sheep husbandry. In eastern North Carolina we have a great extent of wild land which produces grass and affords fair range for cattle and sheep for about two-thirds of the year. This grass is now springing in our pine woods and savannahs, and will shortly cover the surface of the earth with a carpet as green as emerald, and whilst in the tender growing stage highly nutritious. Not before October is well advanced do we expect a killing frost. During this interval of seven months, the flocks and herds receive little attention except that they are penned every night for their manure, and are salted occasionally.

The wintering of sheep is something about which we of this section know but little practically. Most of our farmers who keep sheep, have only small flocks, ranging in numbers from twenty to one

hundred. Most usually these are permitted to pick up a scanty subsistence in the brown fields, or are turned out into the wild woods during the cold winter months. This practice is thriftless and unprofitable. Our climate and soil are well adapted to root crops. One thousand bushels of turnips have been grown on an acre of land in this county. Rye pastures sown early in the fall, with a moderate supply of turnips, cut up by a slicer and fed in troughs, will carry sheep through the winter in good condition. To this should be added a high and strong enclosure, with good shelter, where the flock may rest secure from the depredations of prowling curs by night, and from storms at any and all times.

Year before last I wintered one hundred head of sheep in a field of two hundred acres, where nothing grew in the shape of food except a scattering crop of wild onions. The sheep received daily a moderate allowance of pea nut vine forage. Every night they were driven into a house, 24x30 feet, with a dirt floor, upon which a thin layer of muck had been spread out to catch the solid and liquid droppings. Every night the flock were locked up. In this way were passed the months of January and February. In the spring I hauled out thirty cart loads of excellent manure.

The report of the State Auditor shows that in North Carolina there were in the year 1876, 375,803 sheep. The year following the number increased to 512,514 or an increase of about thirty-five per cent. in a single year. During the year 1878, 28,482 sheep were killed by dogs, whilst 20,385 died from disease. The mortality by disease is only about four per cent. Our climate is evidently favorable to the sheep, whilst our laws are not. Our State Legislature has thus far refused to give adequate protection to sheep husbandry. Dogs to the number of probably 200,000 run at large untaxed. This state of things cannot continue much longer; the Press of our State is outspoken against the dog nuisance, and our people are being gradually educated up to the point of demanding at the hands of their Legislature adequate protection to sheep husbandry. When this is done you may expect to see North Carolina advancing rapidly in this branch, one of the most profitable of rural industry.

R. K. B.

[We shall be pleased to hear from R. K. B. again soon. [Eds Md. Far.]

We learn from the *Frederick Examiner* that the first cattle show in Frederick county, being also the second ever held in the State, was held May 23 and 24, 1822, at Mr. George Creager's tavern, Monocacy Bridge, about two miles east of Frederick. William E. Williams, Esq., was the President of the Society having it in charge.

The Poultry House.

For the Maryland Farmer.

Polish and French Fowls.



HOUDAN HEN.

I promised you in my last article, an account of the distinctive colors of the different breeds of Polish. In doing this I shall not bore or confuse your readers with all the minor shades, and descent learnedly on hackle, wing-bar, tail-covert, and the like, but simply give the main points of coloring. The White Crested Black, should be of a deep, glossy, greenish black feathering all over, except the crest, which should be pure white. This, however, it rarely is, a few black feathers always appearing along the front and back edges of even the finest specimens. A crest totally devoid of black feathers would render the bird a mine of gold to his or her possessor. The comb should be very small and wattles full and red. The White Crested White is, of course, of an uniform white color throughout, the plain variety having the wattles plainly seen, while in the bearded, they are concealed by the beard. The Silver Spangled with greenish black, and in the bearded variety, the crest and muff are, as a rule, much larger than those of either white or black. The Golden Spangled has the same spangling on a ground of golden yellow, and is probably the most showy bird of them all, the cock's back when full furnished, glistening in the sun like a sheet of gold.

The Buff is similar to the Golden Spangled, but the spangles are white instead of black, giving the birds a peculiar appearance. All are birds of lofty and graceful carriage, and as ornamental as useful.

FRENCH BREEDS.

I now come to a variety of fowls, two sub-varieties of which are little known except to fanciers, while the reputation of the third is spreading among all classes of poultry breeders every day. The three prominent varieties known as French, are the Crevecoeur, LaFleche and Houdan, for the varieties known as LaBresse, Breda and Gueldors are little known, and not bred in this country at all. The Crevecoeur strongly resembles the Polish in general shape and qualities, but is larger, more meaty and the hen lays a large egg. — (One of my hens this season laid an egg measuring six inches one way by seven and seven eights the other.) They have a heavy crest and beard, are of a deep black color throughout, and proud and stately carriage. They are easily kept in confinement, and very readily gentled. The LaFleches resemble the Crevecoeurs in color and shape, but have no beard or crest, and are noted for their peculiar comb, which, instead of rising from the lower part of the head, rises in two horns directly from the top of the head and gives the bird a weird appearance. The Houdans are the result of a cross between the White Polish and the Dorking, and bear distinct traces of their parentage. In color they are mixed black and white, have beard and crest as heavy as the Crevecoeur, inherit the fifth toe and massive breast of the Dorking, and the laying power of the Polish. They are the most indefatigable layers of large, white eggs, the chickens hatch early, mature with great rapidity, and are all meat. For residences near a city, or in land not too closely surrounded with trees, they are the most profitable fowls I know. The crest unfits them for woody country, as they cannot see well and become the prey of hawks.

With good range a Houdan hen will almost equal a Leghorn. The chicks will grow fully as fast, and at two months old will furnish meat for the table double in quantity and thrice as tender. The breast of this fowl is peculiarly large and delicious. In confinement they do nearly as well as the Polish, though they eat more, and their laying power seems slightly diminished, but all their other good qualities remain unimpaired. For a cross on common stock they are without an equal, and deserve even more credit than they get. They are rapidly growing in popular favor in other States, and should be encouraged still more in our own. I believe at present, Mr. Geo. O. Brown, of Brooklandville, Mr. Bowman, of Lauraville, in Baltimore county, and myself, in Howard county, are the only breeders of this variety in the State. Of course there may be amateurs who breed for their own amusement, and of such I have no list,

T. B. DORSEY.

Facts of Culture.

From the experience at Waushakum Farm, and from a rather close observation of other fields, and from testimony gained from others, we feel disposed to claim that if an economical corn crop is desired to be raised, the manure or fertilizer must be placed near the surface of a shallow plowed field, the undersoil having been brought into a condition permeable to roots by the plowing for previous crops. The corn is a shallow feeding plant, we feel convinced, although it is also a deep rooter; but being a lover of heat, the rootlets near the surface of the ground, where the temperature is highest, seem to act as feeders. Now, in shallow plowing, the richest portions of the field and the decaying turf or roots are left near the surface; and here, where the warmth is, do the corn roots extend, divide into rootlets, and feed with the most vigor. Wheat, on the contrary, is a deeper rooted plant, and feeds the most vigorously in the deeper and moister and coolest portions of the soil; and hence in growing wheat it seems desirable to plow the manure under and to practice a deeper plowing. Rye, on the other hand, seems to be a shallow feeder, but of this we are not entirely convinced; but oats certainly are, and hence a rich surface soil produces vigorous growth. The potato plant, again, is an intermediate feeder, and hence requires a different method of manuring from either corn or wheat. There is a great difference between the economy of using manures brought about through the ignoring of the rooting habits of the plants which are to be grown. On an exhausted and unfertile soil manure may be applied to one crop, and apparently be inefficient in producing an adequate return in crop, while the same quantity applied to another crop shall produce a satisfactory result; in one case the plant, on account of the relation of its roots to the manure, gains the benefit—all that is possible from the plant food; while in the second supposed case we have manured the land, but not the crop. Indeed, the rooting system of plants is the guide to rotation; and rotation is the economical application of manure, in order to raise the greatest amount of crop at the least expenditure of fertilizer.—*Scientific Farmer.*

THE AMERICAN POMOLGICAL SOCIETY.—We have just heard from Mr. Manning, Secretary, will hold its Seventeenth Session, beginning on Wednesday the 17th September, proximo, at Rochester, N. Y.

THE
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A STANDARD MAGAZINE.

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Agriculture, Horticulture & Rural Economy.
EZRA WHITMAN,
Editor.

COL. W. W. W. BOWIE, Associate Editor.

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Our friends can do us a good turn by mentioning the MARYLAND FARMER to their neighbors, and suggesting to them to subscribe for it.

YOUNG MEN!

It is an easy way to make money by getting subscribers for THE MARYLAND FARMER. Send to cents for Specimen Copies, and ascertain what Liberal Commissions we will allow.

THE MARYLAND JOCKEY CLUB.—This renowned club will hold its May meeting, as usual, at Pimlico, this year under the usual propitious circumstances which have always given it great success. The finest horses in the country will be there to contend for its large purses. The clerk of the weather has heretofore favored the meetings of the club with fine weather, except on or two occasions during a series of years. The coming meeting will attract a great crowd to witness the contests of the best horses from all parts of the Union, in the opening of the racing season of the Northern section. Many untried ones will make debuts, and their performances will be noted as auguries for future victories or defeats. The business men of Baltimore should encourage this association, as it brings thousands of dollars to the city semi-annually. Farmers should come to see the horse in his noblest perfection and learn more of his great worth.

THE VIRGINIA OIL AND GUANO FISHING ON THE CHESAPEAKE BAY AND TRIBUTARIES.—In a pleasant interview we lately had with Mr. W. D. Hall, of Virginia, we were surprised at the extent to which this business is already carried on in the old Dominion. We hear that the present year several more factories will be established. It must eventually lead to the recuperation of the worn-out lands of that State, and should be looked after by our capitalists in Maryland, for not only enriching themselves but furnishing our farmers with the home facility of enriching their lands. Mr. Hall was kind enough to furnish us with the following reliable facts :

In the year of 1869, more than usual attention was turned to this matter, and we gather the following details of its results, from a party engaged in the business that season, viz : 1869.

Men employed on vessels fishing	12
Vessels employed	4
Men employed making guano.	9
Fish taken	3,000,000
Oil made	200 bbls.
Guano made	300 tons

The returns from those engaged in the business for 1878 is also appended ; showing an increase in products, encouraging to a vigorous prosecution of the enterprise, viz :

1878	
Men employed fishing	286
Vessels employed fishing	78
Men employed making guano	201
Amount of fish taken	118,309,200
Gallons of oil made	234,168
Tons of guano	10,832

This industry is yet in its infancy, and the best means of handling the product of the fisheries of the rivers and bays of the State, may not yet be fully understood ; but, with the ingenuity and energy of the fishermen, and patronage of the farmers, in the liberal use of the fertilizers made, and the protection of the Legislation, we have no doubt that ultimately, the enterprise and capital employed in this business, will realize satisfactory results.

The fish used and most prized for this purpose, known as "Alewives" or "Menhaden," are migratory in their habits, and are not used for food ; are very numerous in all the bays, creeks and inlets of the State, and the employment of labor and capital is no small item, and the remains after the extraction of the oil, affords a valuable means of improving the too much worn soil of the farming portion of the State, and deserves every encouragement."

This business has for many years been carried on successfully in portions of the North, especially at Menhaden Bay, New York, which has given the name to these fishes, but well informed parties believe that the waters of Virginia are the breeding places of this variety, called *Alewives* in South. Ichthyologists say there is a distinction—the Alewife is a species of *herring*, and the Menhaden is a sort of small *shad*. But so far as the oil or manurial value is concerned, there is no difference. The refuse flesh and bones, left after the oil is extracted, sells for \$10 to \$16 per ton, according to its state of dryness. Four to six hundred pounds is used per acre as an efficient fertilizer. We should think it a very valuable ingredient in a compost heap.

Cooked or Uncooked Food.

Prof. Farrington, of the Maine State Agricultural College, has just concluded a series of experiments which were begun nine years ago by Samuel Johnson, then farm superintendent, for the purpose of ascertaining the relative feeding value of cooked and uncooked meal for swine. The trials have been carried on several months each year, the greatest care being taken that no food should be wasted, but that the pigs should be fully supplied. The raw meal was simply mixed with cold water and fed immediately, except in very cold weather, when it was given slightly warm. The result is wholly in favor of the uncooked meal for feeding. The Professor says that these experiments prove that the labor and fuel required for cooking food is more than thrown away. This accords with opinions we have held for a long time, and our practice has been confined wholly to uncooked food for more than twenty years. We are not particular to mix the meal and water only as it becomes mixed in the trough by pouring milk or water upon the meal. Meal is cheap and labor dear in New England.—*New England Farmer*,

Maryland Agricultural College.

The annual meeting of stockholders of the Maryland Agricultural College was held at Guy's Hotel, April 9th, for the election of a board of trustees to serve for the ensuing year. Mr. J. Carroll Walsh was called to the chair, and Professor J. D. Morgan was chosen Secretary. The old board of trustees was re-elected, as follows: Hon. James T. Earle, of Queen Anne's county; J. Carroll Goldsborough, of Talbot county; Ezra Whitman and J. Howard McHenry, of Baltimore; Hon. John Merryman, of Baltimore county, Major J. D. Lee, of Prince George's county, and Mr. Allen Dodge, of the District of Columbia. Governor Carroll is ex-officio President of the board, and Hon. Edward Lloyd, President of the Senate; Hon. Fetter S. Hoblitzell, Speaker of the House of Delegates, and Professor Newell, of the State Normal School, are ex-officio members. The trustees held a meeting at noon for the purpose of electing a Professor of Agriculture to the chair made vacant by the death of Professor Briggs. Five applications for professorship were received, among them one from Baltimore, one from Washington and another from Pennsylvania. As a quorum was not present it was decided to postpone the election until the quarterly meeting at the June Commencement, or, if thought advisable, at a special meeting to be called previous to that time. The college has sixty-six students. The standard of the college having been raised in the last year, there is no senior class this year, and consequently there will be no graduates. Captain Parker, the President of the college, was present at the meeting, and reported the institution in an excellent condition, five new students having been received on Tuesday. The college is out of all debt, and has a balance in the treasury. The farm is represented to be in good condition and improving.

A meeting of Maryland dairymen was held in Baltimore, April 15th, pursuant to an adjournment of a previous meeting. The constitution drafted by a committee appointed at last meeting was reported. It provides for organizing "The Maryland State Dairymen's Association," officers to be elected annually, including an executive committee of nine. The membership was restricted to those identified with the milk and dairy business. The following officers were elected for the ensuing year:—President, Hon. Chas. B. Roberts, of Carroll county, who, though not present, was understood to be willing to serve; vice-presidents, A. Bowie Davis, Montgomery county, L. A. J. Lamott Carroll county, C. W. Michael, Harford county;

secretary, W. B. Sands, Baltimore county; treasurer, C. Lyon Rogers; executive committee, Thos. J. Betts, Baltimore and Ohio railroad, C. Cole, Philadelphia railroad, Louis A. J. Lamott, Western Maryland railroad, Thomas Elliott, Northern Central railroad. State at large, Dr. C. W. Chancellor; commercial dairymen, J. D. Lisle and C. H. Lohman.

Caponizing—How it is Done.

Strange as it may seem, we have met with a number of ordinarily intelligent persons who supposed a Capon to belong to a distinct race of fowls, as do Games, Bantams, etc. For fear that others may have a similar notion, it may be well to say that a Capon is an altered male fowl, and bears the same relation to other fowls that an ox does to a bull, a wether to a ram, etc., and may be produced from any breed of fowls. A capon brings in market 50 per cent more than an ordinary fowl, and often double the price of common male birds; besides, a capon will reach double the weight of a common fowl at the same age. As there is no difficulty whatever in caponizing, and the instruments cost very little, the practice might become very general. Having practiced the operation for several years, the writer can truly say that by using no more care, and with no more skill than are needed in operating upon a male pig, not more than one out of 30 or 40 fowls need be lost. For several years the writer has operated on from 12 to 30 fowls each year, and the loss during that time has not been more than five or six birds in all. The operation is best performed upon chickens about 3 months old, although it will succeed, if carefully done, with the majority of fowls when they are 10 or 12 months old. As with many other operations, this is one that can be learned most readily by seeing it done, and we advise those who would undertake it to procure instruction wherever it is available. Still, if one has a little confidence, he will meet with success if the directions here given are carefully followed. In the first place, a table is needed in which a few screw rings are inserted at convenient places; these are furnished with broad tapes, by which the bird is kept fast. It is better that beginners should practice on birds prepared for cooking. Lay the dead bird upon the table, dispose it as hereafter described, and then place the screw rings where they would be needed to secure a live fowl. One or two will be required to hold the wings, and one for each leg; six will be all that will ever be necessary. Place the bird upon the table, and fasten it down upon its left side, where the rings and tapes are. The spot where the opening is to be made is shown

by the x (This spot as shown in the engraving, in the illustrated paper we copy from, the *American Agriculturist*. It is just above the hip joint and a little below the back. The exact spot for the incision will be discovered by dissection of a dead chicken.) Here the feathers are plucked, and an opening is made through the skin with a pair of sharp-pointed, long-bladed scissors. We have found these better than a knife. The skin is drawn to one side, and an opening is made with the scissors between the last two ribs for an inch and a half in length, great care being taken not to wound the intestines. The ribs are then separated by the spring hooks, so as to expose the inside. The intestines are gently moved out of the way with the handle of a tea spoon, and the glands or testicles will be seen attached to the back. The tissue which covers them is torn open with the hook, aided by the tweezers. The gland is then grasped with the forceps, and the cord is held by the tweezers. The gland is then twisted off by turning the forceps, and when this has been done the other one is removed in the same way. Care must be taken not to injure the blood vessel which is connected with the organs, as this is the only seat of danger in the operation, and its rupture will generally be fatal. The hook is then removed, and if the skin has been drawn backwards at the outset it will now slip forward and cover the inner skin which covers the intestines, and close the opening. No stitching is needed. A few feathers are drawn together on each side of the opening and plastered down upon the skin with the blood, where they will dry and form the best possible covering to the wound, which will begin to heal at once. The bird should be fed with a very little soft bread and milk for a few days after the operation, but should have a plenty of water. For two nights and one day before the operation, no food nor water should be given to the birds; this will greatly facilitate the work and reduce the chances of loss. The operation, after a few successful trials, may be performed in less than one minute, and by the use of the rings and tapes, no assistance is needed. Capons may be made to earn their food by fostering young chicks, to which business they take very kindly. To bring them to their full and most profitable size, they should be kept until the second year. By giving them corn meal steeped in warm milk, and providing a warm house, they will grow during the whole winter, and their flesh will become very white, sweet and juicy. A good Capon of Light Brahmans will weigh 12 to 15 pounds, at 22 months old, and will bring at the holiday season \$2.50 to \$3 each. The instruments above described are to be procured of H. H. Stoddard, Esq., Hartford, Conn.

For the Maryland Farmer.

Hobbies—Best Use of Straw, &c.

Returned to my fields of labor in the Keystone State, I have an uneasy sensation that that keen editorial sportsman, your senior, "winged" me while passing through Baltimore, with a snapshot into a promise of a "debut" in your next number. If the game "*ne vaut pas la poudre*," you have him to blame for this infliction, and consign this article to the yawning gulf of the waste paper basket. I shall have "come up to time" and my promise, and can console myself with the adage, "that many a flower blooms unseen," and that "merit does not always meet its reward," (especially in the editorial sanctum.)

Now I am fully aware that there "is millions" in a proper first appearance! Who does not know it? The lawyer elaborating his first case, the politician his maiden speech before a "free and enlightened" constituency, the doctor his first serious head-shake over a bona-fide paying patient, the beauty fluttering over the bewitching costumes of her first receptions, the writer selecting the subject of his "*cacoethes scribendi*."

Glancing over the columns of your excellent April number, kindly presented to me by that aforesaid senior of yours, and bless me, where does he get the "*elixir de la jeunesse*" that keeps him "in statu quo," for after a lapse of years I found him absolutely unchanged, nay even improved in appearance! Has that sex, of whom he is so devoted a servant, undeterred by Terence's

"In amore (applied here to woman, the queen of love) haec omnia insunt vitia, injuria, Suspiciones, inimicitiae, induciae—
Bellum, pax rursus."—

Have they imparted to him the formula of a "fertilizer of youth" possessed by the Pompadours and Mancinis? If so, let him go into the manufacture of this "*nostrum*," and the sale will far excel all the Phosphate, British Mixture, Soluble Sea Island Guanos, &c., now flowing from his vast warehouses. But hold on, I am after a subject for an agricultural article, and must not drift with your senior into the company of the ladies.

Glancing, then, over your April number, I find the discussion of the Kent County Association at their March meeting, as to the use of the surplus straw on a farm, whether to spread it directly on the land or first to pass it through the barn-yard?

Now, as everything from the presidential election to the last new bonnet at church lead the village matron to "think of her dead and gone John and the *lovely china teacup* that was accidentally broken at his funeral collation," so the discussion

of the K. C. A. A. leads me to give my hobby—"manure," a brief trot-out. Now, are not "hobbies" grand things? Who would be without one! Standing ever ready saddled and bridled in the owner's mental stable and ready for a "sniff of air" at any moment! Why, sir, I pity the man without a hobby! Let it be a Shorthorn, Devon, Ayrshire; Percheron or Spanish Jack hobby; Essex or Berkshire; Pigeon, Polish, Cochin, Bantam or any other rooster hobby; a hobby floral, horticultural or apriary, so that it be a hobby and be ridden vigorously. I wish I had chosen hobbies for my subject, just to show you what inventions and improvements, what important and useful progenies were "sired" by that class of stallions, called "hobbies." I verily believe them worthy of a special "stud book."

Now as to manures—artificial and barn-yard. Without entering into a discussion of the utility and preference for either division I think that the use of the first-class is limited to special conditions of soils, special crops and exigencies in crops. An analysis of the soil must determine the fertilizer—a study of the material elaborated by a special plant, the food to be given to it—the necessity of "driving" plants best flourishing in a more genial latitude, the counteracting of late seed times, the desire to clear a field early of a crop, the peculiarly heavy demands made by some plant upon a particular ingredient of the soil—these and other reasons found some of the special exigencies for the application of artificial fertilizers. As regards barn-yard manures we meet a different problem in agriculture. Artificial fertilizers may be compared to the well-considered and fairly promising outside speculations of the merchant who has a loose thousand or so to try a shot in the market, whilst barn-yard manure is to the farmer what the solid business investment is to the merchant not promising the "X" per cent. of speculation, but the sure if slow dividend of a regular business routine.

Further, to carry out this parallelism of mercantile and farming pursuits, it can readily be pointed out how the principles of mercantile success are also those of agricultural success. Let the merchant annually restore to his business in the form of bank balances the stock in hand at the commencement of the year *plus* a proportionate per cent. of gain, and his business is prospering and he on the road of wealth; let the farmer annually return to the soil the substance taken from it *plus* a percentage of plant food, and his farm will improve, his barn-room become too limited and requiring additions. "Very true," growls one of your old readers, "but just to add

that *plus*—'there's the rub.'" I accept the situation and query. Suppose you had used the manure spread this spring on one-half of the area spread over, or on one-third, would not *that* part of the farm have a *plus*? "And the rest the *deuce* of a minus!" I "appreciate," but how far could that minus have been wiped-out by a judicious use of "soiling," by a "green" manuring that is sure to play the important part in American agriculture it has already played in German agriculture? And again, even fields left fallow under a pressure of other claims for manure and a policy which gives sufficient, and in rotation to each claiming acre what would be but a "keeping from starvation" to a multitude of acres, such fields, if previously plowed deep and a new soil exposed to the benign atmospheric agencies, often turn out, not to be the worst investment of this agriculturist. But, hoop la! You see how my "hobby" gallops across field and has carried me already over an inexcusably lengthy track of your magazine. I'll rein in, and make the "critter" behave more decently.

Barn-yard manure then is the farmer's stand-by and the Aladdin's lamp that is to *gild* his home. In the preservation and augmentation of the pile lies the key of agricultural success. Only after the agriculturist has become the successful manufacturer of manure can he become the successful husbandman. This is strong language, but as I stated, my hobby is a vigorous animal, and like the subject under consideration, it is at its best when *pungent*.

First, then, too little attention is generally paid to the receptacle of the manure. Instead of being thrown out into the yard, to filtrate its best and most soluble elements into the ground, a suitable shallow should be laid in cement, graded at one side so as to give easy access to the wagons. Again, this shallow should incline to one corner where a cistern could be dug to receive all liquids from the stables, their washings to. This cistern should have a pump with hose attachment permitting the liquids to be pumped up and to be thrown over the manure pile in dry seasons or when the fermentation progresses too slowly. Perhaps a new idea to some, but a good thermometer to determine the heat of the manure pile is not only of use to the manufacturer of Bruyer's cheese, which is sunk in such piles, but also to that agriculturist who treats his calling as a profession and applies the assistance of intelligent inquiry and the results of scientific investigation to it. The use of such thermometric observations will be at once apparent, when we reflect that the converting of raw and animal substances into manure requires fer-

mentation. Fermentation is ever accompanied by evaporation, and that some of the most subtle and valuable ingredients, ammonia for instance, can and should be *fixed* at proper thermometric indications by the sprinkling on of gypsum, whose sulphuric acid will readily fix the salt of ammonia, or by the use of chloride of magnesia in very rich manures, like pig sty emptyings, sewerage, &c. And here I would suggest a use of the "surplus straw" of the farm, which I think the gentlemen of the K. C. A. A. themselves would permit. I propose a two-fold use: To spread it over the manure vat as a protector against light and too great a heat, and also for conversion by the liquid sprinkles into stable manure. As the gardener uses the hot house frames to take off, put on over his hot beds according to the exigencies of the weather, so the "manufacturer" of manure should use the surplus straw in promoting or in checking decomposition.

And lastly, do you recollect the anecdote of Bella, who dying with her disconsolate Augustus by her side, (the wretch married that pretty little widow, Real Estate, two months afterwards,) Bella summoned her last strength, gazed in anguish upon Augustus and nearly inaudibly breathed forth—"You did not get me that new French bonnet." So I have got a last, ungratified wish, "hobbyhor-sially" considered. My manure pile wants, not a bonnet, but an umbrella. Oh! for a roof to keep the "heavenly" moisture from it.

Water is good in its place—for ducks—to float ships—to put out fires (when there is enough of it which generally is *not* the case)—to drive mill wheels, and to serve as an irrigator—but on the manure pile none of it. Like "Old Bourbon," there may be times when the manure pile can stand a "qualifying" with the innocent fluid, but it must be administered judiciously, and not be "drowned" in it. "Probatum est." The writer some years ago met in Europe on the estates of a titled but practical German agriculturist the "beau-ideal" of his hobby and it *with* an umbrella. The results of such a manure manufacturing as kept in exact records extending over a dozen years, were surprising—I allude only to one, viz: on any crop, manure thus managed, made up in quality one-fourth of the quantity needed, exact experiments carried over years and on different crops showed that three loads of scientifically manipulated manure were equivalent to four loads of the common run of manures. The arrangement and management of compost heaps on those farms, for the estate was a group of large farms, were also interesting, and perhaps worthy of being placed before the readers of the MARYLAND FARMER, but I have

"spun a long yarn," and see already "in my mind's eye" the merciless editorial scissor pare down this "parvum in multo" into a readable length.

This may then suffice to teach your otherwise very agreeable senior not to entice an unlucky "looker on in Venice" into a contributor's promise. But I forgive him provided he shares that "elixir" formula with his,

Very truly,
HAYFIELD.

[The "Senior" returns his compliments to the writer of the above jocose effusion of "Hayfield," alias, Professor of Agriculture, and would say, that he already seems to have the "elixir"—good health and joyous spirits.]

OUR LETTER BOX

Philadelphia, Pa.

* * * * I make the following suggestions: Wool if properly conditioned brings from 3 to 5 cents per lb. more than it does if carelessly handled and the dung locks not taken out, and if farmers would see to it that their wools were thus prepared they would find it to their interest to ship to dealers who will not deduct for the unmerchantable condition, nor take off in the actual weight. So far as the tariff question is concerned my views have undergone considerable change and I now hold that protection to the wool growers is a necessity, for without it Australian wools would drive our fine wool growers to the wall. With protection and good stock and care in handling wools there is a good future for the wool growers of this country.

R. V. P.

Kind Words.

J. F., of New Port, Va., writes: MARYLAND FARMER for April received. This is really a very valuable agricultural journal and should be in the hands of every farmer. The number before us is especially valuable and instructive; and the subscription price is within the means of all—every live farmer should have it.

Baltimore, April 15th, '79.

Messrs. Editors Maryland Farmer:—I received the MARYLAND FARMER for April, and I think, without any exception, that it is one of the best and most instructive agricultural papers published in the South; therefore I value it as its *weight in gold*. I find in it an able reply by the proprietor to the abusive personal attacks of the *American Farmer*, and also a characteristic card by our old and estimable friend, W. W. W. Bowie—"Patuxent Planter."

Yours,

S. J. M.

From a Georgia Fruit Grower.

April 7th, 1879.

Editors Maryland Farmer:—I confess that I feel very little like dashing off a letter about “*The Fruit Paradise*” of Middle Georgia this morning, when I look over acres of peaches, pears and grapes which were so full of promise last week, that have just been killed by frost. When we learned that the extreme cold last winter had killed nearly all the peaches and grapes in the bud in many Northern States, our selfishness said: “Now we have got the market.” But the old saying that “man proposes and God disposes,” has proved true, and rebuked our selfishness with a kiss of cold. Notwithstanding all this, I yet think we have the best fruit country in America.

About a year since I wrote several letters to *The Atlantic Constitution*, about Georgia as a fruit country. Soon after I received about a half bushel of letters from North and West asking for particulars about this country *with no stamps inclosed* to pay postage. All were promptly answered and invited to come and see Georgia. One man from the West replied that he would like to come *if he would be safe* with us. I wrote him to put away his ignorance, that the war was over, and Georgia back in the Union, that I would guarantee his safety. Another wanted to see our State, and especially my fruit farm. He was invited to come to my house and we would show him around. He came, expressed his astonishment at our success, and held on to us nearly three months. I began to think of a Georgia miser who “got religion” and invited the preacher and family home with him. The preacher accepted, and after staying ten days, the old man says to him: “My Brother, wont you come and make me another visit?” “O, yes; certainly he would with pleasure.” “But I am afraid you will not,” says the old man. “Why not?” says the preacher. “Because,” says the old man, “I am afraid you will never go away.”

Now, if any of your readers do not believe we have the best fruit country on 33 latitude and 100 feet altitude, let them come and see.

W. W. WOODRUFF.

Meriwether Co., Ga.

Eds. Md. Farmer:—I enclose subscription for the FARMER for 1879, and when you enter it on your books, let me ask you to write, “*never stop*,” by my name, as I do not wish to lose a single copy. May newer and repeated achievements await you, and every success attend you. With great respect,

Your fellow citizen, P. W. M.

Enquiries About Potatoes.

Our friend Hodson, of Dorchester County, Md., wishes to know our views about the soil best suited to the potatoe, the cultivation of, &c., the best two or three varieties of late potatoes, and *why* they are the best.

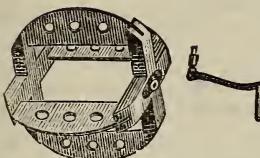
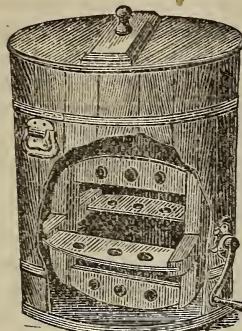
We think, for Maryland that the late Rose, Peerless and White Peach Blow are the best for late planting, in the order named. Why? Because the late Rose is as popular in the market as the Early Rose, and brings always the top of the market, at all seasons. The Peerless is a great yielding sort, and very large, a good keeper and popular in the Baltimore market especially. The White Peach Blow as a late winter potatoe is popular everywhere and productive—tho’ perhaps in most soils not so much so as the Peerless. We have found that it does best in a rather heavy soil. Cultivation: The land should be an alluvial soil, with a good turf plowed well in early winter, that the turf may become decomposed, made rich with well rotted stable manure. Cross plowed, and the manure well intermixed in the soil. About the 10th of May, lay off in trenches 3 feet apart, and 3 or 4 inches deep; drop the potatoes, cut to 2 or 3 eyes each piece, from 12 to 20 inches apart, sprinkle over leashed ashes, or some good phosphate, cover with the single horse plow or with the hoe. As soon as the potatoes are coming up pass the harrow — smoothing harrow is the best, over the ground, to level it and kill the young weeds or grass—then in a week run the harrow over the way the potatoes are planted. Dress each row with plaster. Keep clean with the cultivator or shovel plow, until nearly in bloom, then with a small plow, throw a furrow toward the rows, so as to give a slight hill ye’ leave the earth level about the plants. The middle space between each row can be worked with a shovel plow. Any weeds which may appear afterwards can be pulled by hand or destroyed by hand-hoeing. Of course the beetles are to be kept off by the use of Paris Green or hand picking. If you have not the ground as described to be as the best, you must do the next best thing to it, following as near as you can the directions here given, which are the result of our own experience and that of many successful potato growers.

J. C., our venerable Quaker friend, of Pennsylvania, in remitting his subscription for the MARYLAND FARMER, which he had overlooked longer than usual, says: “Friend Whitman—who was the most patient man? Job. Who is the most patient man of the *present age*? E. Whitman, I believe. Thy bill has been greatly neglected—too bad!”

THE DAIRY.

For the Maryland Farmer.

Monumental Churn.



so much satisfaction, it is with pleasure recommended to those in want of a good churn. We refer the reader to the advertisement of Messrs. E. Whitman, Sons & Co., who have them for sale. Price \$2.50 to \$3.50.

PRACTICAL FARMER.

For the Maryland Farmer.

Butter Packages.

Messrs. Editors:—As it is now drawing near the season of the year when butter must be packed solid, it will be well to advise butter-makers how to pack their butter so as to secure its full value, and to warn them against the many abuses of packing which cause losses of large amounts of money every season.

For farmers who make from 20 to 30 lbs. of butter every week or ten days, the 25 lb. ash pail is the best, this package is also a very good one for makers of larger quantities, as the size is a very convenient one for supplying families and small stores which require small packages and cannot use so much at a time as the larger ones contain. For large dairymen, the ash or white oak tub holding 40 to 50 lbs. is best. For butter packers and shippers, ash or white oak tubs 40 to 50 lbs. and white oak firkins, 100 lbs., are the best. All wooden tight packages should be soaked two to three days at least, before packing, the water then absorbs most of the flavor of the wood and so prevents the butter from being unpleasantly flavored on the sides of the packages. There are three special objections to packing in unsoaked or dry packages: First, the natural wood usually imparts its flavoring matter in shape of acid which both injures the flavor of the butter, and also causes decomposition of the butter which is in contact with the staves and often discolors it. Secondly, the dry package absorbs all the pickle and flavoring juices, and the butter, after remaining in the package any length of time, will lose flavor and will not

keep so well after losing its pickle. Thirdly, butter packed in dry wood packages is very apt to stick to the sides of the packages and will not strip out clean and smooth. This is very important to the butter dealers who strip the butter, leaving it in one solid mass to cut from, in retailing. There are many packages which are objectionable for various reasons. Stone jars, are very heavy and add greatly to freight charges, and the butter has to be dug or cut out of them or else the jars have to be broken to get the butter out solid. All pine or other strong flavored wood is very objectionable, as butter is a rapid absorber of these flavors and is greatly injured by them. All packages which are larger at the bottom than top are objectionable on account of difficulty in stripping them, whilst the butter after being frozen or hardened by cooling can easily be turned out of the regular butter tub or pail which is made always larger at the top than bottom.

Those who wish to receive full value for butter will find it to their interest to use the neatest and best oak or ash package, and for long keeping the oak can be advised as the best.

Respectfully,
W. S. TEMPLE.

THE MARYLAND FARMER.—The April number of the MARYLAND FARMER contains a long array of interesting articles. Sheep husbandry and wool manufacture is the important subject of the first article, while "Garden work for April," "Best kind of Cattle for Farmers," "Will a Village Cow Pay," are some of the themes discussed in others. The MARYLAND FARMER is published by Ezra Whitman, 141 W. Pratt St., Balt.—*Evening Bulletin*.

What Cows Shall be Kept?

A writer in the *Rural New Yorker* in a sensible article on "What cows shall be kept?" gives the following statement of facts about Ayrshires, which should be well considered by those who wish to keep cows chiefly for their milk:

"Beacon Belle, an Ayrshire cow imported and owned by William Crozier, Northport, Long Island, gave 43½ quarts of milk, equal to 95 lbs. daily, when fresh, at eight years old. In 1873 when 15 years old, she gave 23 quarts or 50½ lbs. daily, a month after having her 13th calf."

"Dr. E. Lewis Sturtevant, of Waushakum farm, Mass., records the yield of his herd during seven years, viz :

Average of Natives, 4775 lbs per cow.

Average of Ayrshires, 5309 lbs. per cow.

The yields in the best year of the seven for each class was :

Average of Natives, 4834 lbs. per cow.

Average of Ayrshires, 6047 lbs. per cow.

A daily average of 15 $\frac{3}{4}$ lbs. for the Natives and of 19 lbs. for the Ayrshire. The yield of the 10 best Ayrshires out of 18 was 7317 lbs. in the year, and of the 10 best Natives 6943 lbs. One Ayrshire cow, Lady Kilbourne, gave 1338 lbs. in one month after calving; another cow, Georgia, gave 1417 lbs. in one month when fresh. These cows weighed about 850 lbs.

In averaging the yearly yield of first-class Ayrshire cows. Dr. Sturtevant places it at 5674 lbs. or 2629 quarts per cow or nearly nine quarts per day for 300 days or 10 months, leaving the cow dry for two months in the year. As to the quality of the milk Mr. Miller, of Delaware Co., N. Y., reports one Ayrshire cow as yielding 14 lbs. 13 oz. of butter in one week in June; another gave 14 lbs. 11 oz. and another 13 $\frac{1}{2}$ lbs. a year previously the last cow gave 18 $\frac{1}{2}$ lbs. in one week. In a pamphlet, "Milk Analyses" by Prof. Sharpless, Ayrshire milk is shown to have almost precisely the same composition as human milk and is therefore the best substitute for the natural food of infants."

"That is not so good as I expected," said Mr. Martin; "but it is good enough; 2,639 quarts at 2 $\frac{1}{2}$ cents is equal to \$65.97 and at five cents would be over \$130 per cow in the year."

"Harris Lewis's Short-horns yield 251 lbs. of butter per year and he expects to reach 300 lbs." I rejoined; "if 20 lbs. of milk make one pound of butter, that is, 5,000 to 6,000 lbs. per cow, but his cow Princess, will eat 50 per cent. more than Ayrshire cows. Their great advantage, however, is that when they have passed their profitable age for

milk, they are easily fattened for beef. On the whole, I think the Ayrshires are the cows I ought to keep here."

The same writer excludes the Dutch or Holstein cattle as fit for dairy purposes. While they give enormous quantities of milk for making hard Dutch cheeses, the milk is watery and he says will not give two pounds of butter from a week's milk.

The article is written as if it were a report of a conversation between young and old gentlemen, and one of the latter says:

"When I was a boy, it took the whole of one cow's milk to make enough for my breakfast, and if we got two or three quarts at a milking from a fresh cow, that was doing pretty well, and the first good cows we could get, were the Ayrshire cross that came from New England about 40 years ago. Since then the best cows I have seen or owned had Ayrshire blood in them."

"Flint says, for purely dairy purposes the Ayrshire cow deserves the first place, and the Ayrshire cow gives a larger return of milk for the food consumed than a cow of any other breed," said Fred, who being fresh from books quoted confidently and fluently.

"The best cow I have seen," said I, "was 'the cross-bred Ayrshire and Short-horn exhibited a few years ago by General Hungerford at the New York State Fair. She gave over 100 pounds of milk a day for three days in succession, which is equal to 45 quarts a day. She was a heavy-bodied cow that would make, when fat, 600 pounds of beef at least. Now such cows as that are what we want."

"If we could ever get them," remarked Mr. Martin, dubiously.

"Why should we not? We have a race of beef cattle from which we can rear beeves of 1,400 lbs. at two years old and 1,800 lbs. at three years old, every time by proper feeding; now what is to prevent us from making a race of cows that will yield milk as surely as a Short-horn steer will make beef. The milk-producing capability should be made hereditary. We have pigs sheep and cattle that possess certain meat-making qualities and never fail in them; we have the same as regards butter in the Jersey, and we want the same in regard to milk."

"Why don't we have plenty of good Short-horn dairy cows now?" remarked Dr. Jones; "Bell, in his history of Short-horns, mentions the first Duchess cow which gave 30 quarts of milk a day and made 24 pounds of butter a week, and that time cows nearly as good were not rare; now, it takes two Short-horn cows to nurse one calf."

This is what is said of the Jerseys:

"These Jerseys, or Alderneys, as I call them, have ruined the stock of cattle here," said my old neighbor. "We have little scraggy beasts that give a little rich milk, perhaps, but after a few years they are useless, and to get fat upon them is out of the question. I was offered \$8 the other day for a dry Jersey cow, and she has eaten \$10 worth of meal in trying to make her fat. Jerseys may be well enough as buttermakers; but, for a milk dairy they are poor stock."

We are not endorsing all this, but give it to show what a contrariety of opinion exists as to the relative merits of the different breeds of cattle. Every farmer before he selects a breed should determine for what purpose he designs to breed cattle and decide for himself. It is evident that there is no one breed that will be pre-eminent combining in the purposes of butter making—milk giving—cheese-making—beef and work cattle. The Devon perhaps comes nearer to uniting all these qualities than any other breed, unless it be the Hereford which in size and tendency to make fat beef surpasses the Devon, and is its equal or may be superior in all qualities other than as yoke cattle. In this line they have no equal. [Eds. Md. Far.

PUBLICATIONS RECEIVED.

From Prof. E. L. Crall, Cooper Institute, N. Y., a copy of his "Manual of Instruction accompanying Crall's Patent Drawing Verifiers, with copies' price \$1. We have examined these verifiers which have the recommendation of artists and others, and are satisfied that they are admirably adapted for what they are intended. To every beginner in drawing they would seem to be indispensable, as they act in place of a tutor in correcting and showing defects in the drawing. We recommend their use to all who delight in the fascinating recreation of making sketches. Drawing is both an useful and ornamental branch of education, and should be practiced by every young person.

New Principles of Fruit Evaporation. Is a pamphlet with that title, issued free, by the American Fruit Dryer Manufacturing Company, of Chambersburgh, Pa. It should be obtained by every one who has fruit or corn, &c., that they desire to dry, or which would decay because of distance from market or want of sale when ready for use. Thousands of dollars are saved yearly in the country by the use of these dryers.

Transactions of the Massachusetts Horticultural Society for 1878, Part II, from Mr. Robert Manning, Secretary. These transactions are always welcome, because they are invariably full of interesting and instructive facts and statements, valuable to horticulturists.

HORTICULTURAL.

For the Maryland Farmer.

Fine Large Raspberries

HOW TO PLANT AND GROW THEM

BY R. H. HAINES.

The unusually large number of new varieties of this fruit that have recently made their appearance, makes it somewhat difficult for a novice to decide as to which varieties best merit cultivation. A few short descriptions of some of these will perhaps be an assistance in making a selection; though it should be understood that soils and climates make so much difference, that actual experiments or trials in a limited way of these newer fruits, will decide their value for each person much better than any words that I can write. However, some of these new varieties have already revealed such a general adaptation to widely separated localities, as to show that even a preliminary trial will hardly be needed before engaging in their larger cultivation. We are certainly fortunate in this land in being favored with so many large and desirable varieties, and of all colors, qualities and times of ripening. In colors alone we can name almost as many as the rainbow contains—bright scarlet, crimson, dark purple, brown, white, orange and black—while the early summer, as well as the late fall months, alike find the bushes ripening their fruit. Certainly those who find enjoyment in variety cannot but feel but that the Raspberry furnishes its full share.

The Cuthbert is the first of these newer varieties that I will now describe. It is one of the largest of red Raspberries, the fruit measuring $2\frac{1}{2}$ inches around, and some specimens slightly over 3 inches in circumference. The berries seem to be well adapted to either table use or market purposes, being of excellent quality for eating, and yet sufficiently firm for shipping to distant points. Fruit growers will readily recognize in this fact a merit that is to be found in but few of the other varieties. The plants have thus far shown great vigor of growth and unusual adaptation to different soils—growing thrifly on sandy as well as heavier clay loams. Their unusual hardiness will be well appreciated, as thus far they have not required protection in winter.

Pride of the Hudson. The large size of the berries—some specimens measuring over 3 inches around, and the wonderful productiveness of the plants are the two chief points of value in this variety. As to its habits for bearing, I will men-

that at one time over 600 berries, small and large, were counted upon a single cane $3\frac{1}{2}$ feet high. The plants have not proved as hardy as it was thought during the first few years would be the case, and are benefitted by covering in winter. The fruit is of a rich red color, delicious and melting, and better for home use than for distant markets.

Florence is a large yellow or orange colored berry that is now attracting considerable attention. The plants in habits of growth are similar to "black-caps," taking root from the tips. The fruit is of good quality, and is produced in abundance. *Caroline* and *Brinkle's Orange* are other yellow varieties—the last requiring protection in winter in this latitude. *Mammoth Cluster* and *Gregg* still stand unsurpassed among the black varieties, though *Davidson's Thornless* and *Doolittle* possess sufficiently good qualities to cause them to be retained in many gardens. *Early Prolific*, *Queen of the Market*, *Henrietta* and *Reliance* are red varieties of decided merit, that ripen, some of them early, and others late in the season.

The Raspberry can be grown on quite a variety of soils, and there are few portions of our land but where some of the varieties can be grown successfully. Even upon soils of very heavy clay, the black varieties and some others do well, though a moderately moist loamy soil seems to be the best fitted for growing them in their greatest perfection. The plants should be set out either four feet apart each way, or in rows 6 or 7 feet apart with plants every two or three feet along in the rows. The earlier in April that they can be planted out, the larger will the growth be the first year. Still, I have sent the plants through the mails to quite distant customers even as late as in May and with very good success. A frequent stirring of the soil, but not too close to the plants, and liberal application of fertilizers once a year, will soon result in many a pleasant feast of this delicious fruit.

House Plants and their Cultivation.

MR. J. T. C. CLARK'S ESSAY READ BEFORE THE HORTICULTURAL SOCIETY OF THE DISTRICT OF COLUMBIA.

The Horticultural Society met last night, the president, Mr John A. Baker, in the chair, and Mr. G. T. Chase secretary. J. T. C. Clark, esq., read an interesting essay on house plants and their cultivation. The cultivation of flowers was one of the few pleasures which improve alike the mind and the heart and makes every true lover of these beautiful creations wiser, purer and nobler. The

book of nature is open, and its beauties and mysteries are unveiled to all who study it. All plants have their peculiarities, which must be understood to successfully cultivate them. Persons grow flowers for different objects, but few can realize the absorbing love that causes the genuine student of nature to bow the head in the presence of the heaven-lent loveliness of Flora's offerings. The love of flowers has been manifested in all ages and among all conditions of persons. The pleasing adornment of our homes with beautiful flowers impart to our children the love of nature and the refinement of social life. Let us then learn to plant and cultivate them. To secure suitable house plants for culture—such as will repay us with beautiful flowers through the winter—we should understand their adaptability for this purpose. We find plants differ widely in their habits and that they require different cultivation. Select a few vigorous symmetrical, hearty plants. One well tended will give more pleasure than twenty half nurtured. To secure flowers or foliage through the winter proper care should be given them. For housing simply, they may be kept in any ordinary room having light, with temperature not below 40 degrees. Plants which have bloomed throughout the summer cannot be expected to bloom through the winter, as a season of rest is necessary for all plants. For winter flowering, plants should be kept in pots all summer, and the buds should be pinched off as they appear, until the first of September. The later the buds are pinched off the later will they bloom in the winter. This is especially the case with carnations, bouvardias and heliotropes. Plants should be given fresh air every day. They should be placed in such position as each part can receive light, or they will become weak, straggling and out of shape, by bending toward the light. Light is essential, and the green color of the foliage is owing to it. The influence of light is also shown in modifying the stem and branches, which always turn towards the light. Light is the stimulus of the vital principle—during the day it affects the elaboration of the elements of water and carbon; producing the different specific species, and is the chief agent of maturation as well as of color. Sudden changes of temperature should be guarded against. Excessive heat destroys the foliage and buds. An equal temperature should be preserved, with suitable ventilation. A temperature averaging from 55 to 75 in the day and not below 45 in the night will be found suitable for most house plants. The soil used in potting should be neither too sandy or too heavy. A mixture of leaf mould, sand and common garden soil will be found suitable for most varieties. Fine

powdered charcoal placed in the bottom of the pots will correct the acidity of the soil from over-watering. Stimulants, such as guano, bone dust and ammoniated preparations may be used to advantage. In potting, the pots should be free from mould, suitable in size, and in order to secure proper drainage pieces of broken flower pots, charcoal, &c., should be placed in the bottom of the pots. Water of ten to fifteen degrees above the temperature of the room should be used. The different insects enemies to the house plants were described, and ways suggested how to rid the plants from them. The subject was further discussed by Messrs. John Saul, Col. Curtis, Wm. Saunders and others. The latter spoke of the culture of the geranium and how to develop the best kinds. Mr. Saul exhibited some rare flowers and explained their peculiarities and histories, as did also Mr. J. T. C. Clark, Mr. Fowler and others.

April Show of the Horticultural Society.

The April meeting of the Maryland Horticultural Society was held in the concert-hall of the Academy of Music. A very fine display of store or green house plants, orchids, ferns and spring roses were on exhibition and an excellent model of ribbon gardening was also displayed. The following prizes were awarded: Certificates of merit to Patterson Park conservatory and Wm. H. Perot for the best six distinct species of green-house plants in bloom. Money prizes as follows: W. H. Perot, for best six named varieties in pots of hybrid perpetual roses, for variegated foliage geraniums, also for the best specimens of blooming orchids; R. L. Rasin, for best six varieties of ferns; A. Brackenridge, for best 12 verbenas in pots, also for best model of ribbon gardening; S. Feast & Sons, for table design, for fruit basket of cut flowers and for best 24 cut pansies in bloom; Cromwell & Congdon, for 12 finest specimens of cut, blooming tulips; E. Hoen, for best six heads of lettuce, and Willie Feast, for best hanging basket.

THE MARYLAND FARMER.—The April number of this invaluable monthly publication has been received, and is filled with choice reading matter for farmers and others. It is conducted, as is well-known, by Mr. Ezra Whitman and Col. Walter W. Bowie. The attempt on the part of "the American Farmer" to reflect upon the character of Col. Bowie, either as a farmer, lawyer or editor is not creditable to the Sands. Col. Bowie is a high-minded, honorable Southern gentleman. His ability as a writer no one can question, as he has given ample proof for many years. He is a gentleman of unimpeachable character, and no man stands higher in the estimation of the people who know him, than our clever and genial friend Col. Bowie. May he long live to edify the readers of the "Maryland Farmer" and kick out of sight the dirt that has been thrown in his path.—*Anne Arundel Advertiser.*

LADIES DEPARTMENT.

Chats with the Ladies for May.

BY PATUXENT PLANTER.

"When beeches brighten early May,
And young grass shines along her way ;
When April willows meet the breeze
Like softest dawn among the trees ;
When smell of Spring fills all the air,
And meadows bloom, and blue-birds pair ;
When Love first bares her sunny head
Over the brook and lily bed ;
Nothing of sound or sight to grieve
From choir-ing morn to quiet eve.—
My heart will not, for all its ease,
Forget the days to follow these.
This loveliness shall be betrayed,
This happiest of music played
From field to field, by stream and bough,
Shall silent be as tuneful now,
The silver launch of thistles sail
Adown the solitary vale ;
That blue solicitude of sky
Bent over beauty doomed to die,
With nightly mist shall witness here
The yielded glory of the year."

This queen-month of the year has come again to gladden us with flowers, blossoms, early fruits and singing birds;

"Through the silver mist
Of the blossom-spray
Trill the orioles ; list
To their joyous lay!

'What in all the world, in all the world,' they say.
'Is half so sweet, so sweet, is half so sweet as May?'

This month the garden demands attention, and the flower garden must be set in order, seeds sown, bulbs planted and shrubs trimmed, if not done before, and others set out. It is a busy month with our ladies, who desire a nice flower garden, but especially to rural matrons, who also have to look after the kitchen garden, the dairy, the apiary and poultry yard. Each and all, necessary to the comfortable enjoyment of country life in its most acceptable form. Every home should have its well kept lawn and ornamental trees; its abundance of beautiful flowers; its well-kept garden, filled with all the varied vegetables and delicious fruits, as they come in season, and plenty of poultry, eggs, rich milk and golden butter, with a full supply of honey always at command. There is not only pleasure in having these necessary delicacies, but it is the matron's duty to provide them for her household. Where all these attractive features

are seen and kindly offered by a refined hospitality, such an house-hold will be bound together by loving ties, friends will cluster about it, the children will reluctantly leave it and their fondest thoughts will ever cling to it.

One of the most agreeable sights in the country is a nice lawn about the dwelling. This can be had with little expense and labor by the frequent use of a lawn mower, and I commend the "Philadelphia."

The Philadelphia Lawn Mower is certainly a perfect mower. No lawn can be kept in the most approved order without a lawn mower of some sort, and while there are many which do the work more or less perfectly as compared with the old time scythe, I candidly believe the Philadelphia Mower, as now improved, is at the present time the nearest approach to perfection for many reasons than any other yet produced. Its use on the public grounds of various cities and on thousands of places belonging to individuals who take pride in the thick, evenly clipt turf of their lawns, attest its popular merits. It is beyond question, that by the frequent use of a lawn mower the turf is improved in thickness, luxuriance and every essential of its beauty. The small cost of such a mower enables every person who has a lawn, to possess one, and it can be operated by a girl or boy, affording healthy exercise in the morning and evening, while this pleasant employment is useful and remunerative. A mower of this sort is both profitable and pleasurable. The Messrs. Whitman advertise it in this number of the MARYLAND FARMER.

Among the Granges.

Limestone Valley Grange, No. 70, held an interesting meeting at its Grange Hall, Clarksville, Howard Co., on Thursday, April 3, at 3 o'clock, Bro. W. M., F. C. Pue in the chair; W. S. James Harban. Bro. Jno. S. Watkins, chairman of committee on agriculture, under head of report of standing committee, stated that he desired to make a few suggestions in regard to the improvement of our agricultural processes. He wanted the farms of grangers to look better and be better than those of other farmers, to show the practical advantages the Order conferred upon its members. Now you could not tell a granger's farm from any other. He next alluded to the many adulterations practised by those who sold farmers their supplies and called upon the members to take steps by rigid co-operation to prevent being thus deceived. He then referred to the large profit of fertilizer manufacturers, and spoke of the necessity of some action on the part of grangers towards getting up an establishment of their own. He concluded by urging members to institute experiments on their farms of different kinds to ascertain in what direction improvement could be made and report the same to the grange.

Bro. Hardey suggested that the sisters also make some experiments in domestic economy and

the departments under their charge, and thought a report on the best mode of treating chicken cholera for instance would be of advantage to all the members.

Bro. Watkins moved the appointment of a committee to consider the fertilizer question and report at the next meeting. Adopted.

Bro. Dawson Lawrence, of Brighton, Montgomery County, was present, spoke of the agitation by his Grange of similar questions to those discussed by the members of the Limestone Valley; thought the joint action of the two granges might prove advantageous to the members.

Brighton Grange, No. 60, held its regular meeting at its hall, Brighton, Montgomery Co., on Friday, April 4, at 3 P. M. In consequence of death in his family, W. M. Hartshorne was absent, and W. O., R. H. Lansdale filled the chair; W. S., E. M. Lansdale.

Bro. Lawrence, as a member of the delegation to represent Brighton in the County Grange submitted a paper on "The evils of the farmers situation and the mode of redress," to be presented at the next meeting of the county grange to be held at Brighton Grange Hall on the last Thursday in April. The Grange adopted the report as expressing its sentiments on the subject.

A committee on the fertilizer question was also appointed to confer with the committee on fertilizers of Limestone Valley Grange which is to meet on Thursday, April 17, at Clarksville, Howard Co., consisting of Bros. Scofield, Gartrell, Clark, Lawrence and Stabler. Arrangements were next made to properly receive the Montgomery County Grange, April 24. Discussion ensued on the many phases of the fertilizer question above alluded to in which various views were taken by the brothers present, and after protracted discussion by Bros. Hardy and Pue, of Limestone Valley and Bros. Gartrell, Scofield, C. H. Hartshorne and Lawrence of Brighton, the matter was left in the hands of the committee.

W. L., P. T. Stabler next took the floor for suggestions for the good of the Order. He urged support of the State Agency, and gave good ground for his position. An account of feeding and fattening cattle was given by the W. L., this subject having been presented to him by the Grange for his special consideration. He stated that ten head of steers were put up in stable about Nov. 1, '78 and just sold, having been confined in their stalls nearly the whole of that time, seldom being let out. They were fed a peck a day of cob meal and clover hay and brought about 5 $\frac{1}{2}$ cents per lb., when sold, an average increase in money value of \$30 per head, at a cost of about \$17 per head for feed.

Bro. T. J. Lea, visiting member for Olney Grange, Montgomery Co., said he had been making some experiments in feeding milch cows and found altho' he had not finished his calculations that the cob meal was giving better results in milk than the same money value of corn meal. The W. L., finished his "suggestions" by reading a piece of wholesome advice to husbands on the necessity of kind and considerate treatment of their wives. Miscellaneous business was also transacted, and the Grange adjourned at 10 o'clock P. M., to meet on Friday, May 2, 1879, at 3 o'clock P. M.